

Clerk's File Copy

THE MAGNAVOX COMPANY, et al.,

Plaintiff,

vs.

CHICAGO DYNAMIC INDUSTRIES
and SEEBURG CORP.,

Defendants

No. 74 C 1030
and
74 C 2510

FILED

Monday, January 3, 1977 MAR 2 - 1977

1:50 p.m.

H. Stuart Cunningham, Clerk
United States District Court

Parties met pursuant to adjournment.

PRESENT:

MR. ANDERSON
MR. WILLIAMS
MR. ALLEGRETTI
MR. BRIODY

appeared for The Magnavox Company

MR. GOLDENBERG
MR. RIFKINappeared for the Seeburg defendants and
World Wide Distributors;

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THE COURT: All right, gentlemen.

WILLIAM BENNETT RIBBENS,
called as a witness by the plaintiffs, having been previously duly sworn, was examined and testified as follows:

CROSS-EXAMINATION (Resumed)

BY MR. GOLDENBERG:

Q Dr. Ribbens, doesn't the '507 patent disclose as one of the games that can be played a billiards game?

A Let me see. Billiards or pool?

Q Well, I think it says cushioned billiards.

I refer you to column 18.

A I was just going to look at the list of illustrated -- it is column 18, you say?

Q That is what I have, sir. If you have some other reference --

A No. What line are you referring to?

Q Line 30.

A Oh, yes.

THE COURT: What column?

MR. GOLDENBERG: Column 18.

THE WITNESS: 18?

MR. GOLDENBERG: Line 30.

(There was a brief interruption,
after which the following further
proceedings were had herein:)

THE WITNESS: Yes. I have found it.

BY MR. GOLDENBERG:

Q That does describe a billiards game, does it not?

A Yes, it does.

Q So encompassed within the scope of the '507 patent was a billiards game, wasn't it?

MR. ANDERSON: Your Honor, I object to "encompassed within the scope of," only in that it is a phrase usually used in referring to claims.

THE COURT: I understand that we are talking about the specification.

THE WITNESS: Yes.

BY MR. GOLDENBERG:

Q That is also encompassed within your statement of what the invention of this patent is, is it not?

A I am sorry?

Q A billiards game is encompassed within your statement of what the invention of this patent is, isn't it?

A Yes.

THE COURT: Let me go back a minute, Mr. Anderson.

If something is in the specifications, it certainly is encompassed by the claims, is it not?

MR. ANDERSON: No, your Honor. Definitely not. I think there are 60 claims or so in the patent. Some will read on one of 10 or 15 embodiments. Some may read on all of them. Some may read on none of them.

THE COURT: What I am saying is anything that is in the specifications certainly is encompassed by one or more claims.

MR. ANDERSON: No. Not necessarily.

THE COURT: You mean you put something in the specifications that is not covered by the claims?

MR. ANDERSON: It is quite possible that could happen.

THE COURT: It would not happen intentionally?

MR. ANDERSON: I would think the applicant would not normally want that to be true and would seek to avoid it and would try to get claims broad enough to cover as much of what he teaches as possible. But it is certainly possible.

THE COURT: All right. I had thought that --

well, all right.

MR. ANDERSON: It depends, in the course of prosecution, on the prior art the examiner comes up with. Quite often the applicant may start out thinking his invention is broader than the prior art finally shows it to be, and he has to narrow it. On the other hand, he may find if his invention is broader, and he may broaden it in the prosecution. Both are permissible within the Patent Office's procedures, I believe, and I think Mr. Goldenberg probably would agree with that.

THE COURT: As a matter of procedure and not with reference to this particular case, what is the usual sequence of drafting in these patents? Does one draft specifications and, after he sees what he has drafted, the claims?

MR. GOLDENBERG: It varies with the attorney, your Honor. I know many attorneys who will write their claims first. They think, I believe, that this permits them to identify those portions of the detailed description that they should focus in on to make sure it is there. It identifies the invention, if you will.

On the other hand, I know attorneys who

write the specifications first, and we each bring to this whatever preconceived thoughts we have in that matter.

MR. ANDERSON: I personally write at least one claim and then write the description and then usually, when I get finished with the description, the specification and drawings, I see other things that might be claimable, and I write some more claims.

Then in the Patent Office, of course, depending on the art, sometimes you find you disclosed something that you are not entitled to claim, and you change the claims in the course of the prosecution.

THE COURT: Thank you.

MR. GOLDENBERG: I have no preference, your Honor. It depends on how I feel that day.

BY MR. GOLDENBERG:

Q In the '507 patent I direct your attention to column 12, to the text starting at line 51 and continuing through to the following paragraph. I would ask you to read that, sir.

A You want me to read it aloud, or are you asking me to read it for my own information?

Q Read it aloud, those two paragraphs.

A "With voltage control of a spot's horizontal and vertical position it is obvious that this motion is similar to that of a spot on an oscilloscope. Thus, the TV spot can be made to follow any path that can be made on an oscilloscope.

"One example of this is Lissajous patterns. Phase displaced sinusoids used for horizontal and vertical positioning (applied as the e_H and e_V inputs to the spot slicers) result in spot paths of circles, ellipses, figure 8s and so forth."

Q Will you tell the Court what a Lissajous pattern is?

A It is a symbol -- not a symbol -- it is a display on a face of an oscilloscope which is formed by driving the oscilloscope vertical horizontal inputs with phase coherent signals that bear a simple relationship. For example, I could have one sinusoid on the vertical input of an oscilloscope and another sinusoid on the horizontal input, and by varying the relative time displacement between those two sinusoids, I can alter the display from either a separate line to an ellipse, and finally a circle.

So it can be viewed in one sense as a means for displaying a symbol on the oscilloscope.

THE COURT: Can you tell me again what an oscilloscope is?

THE WITNESS: It is a measuring instrument which utilizes a cathode ray tube for the display, and it has the capability -- it generally is used so that the vertical axis -- it responds to the input on one set of terminals. That is normally the signal that you are trying to examine. The horizontal motion is either controlled electronically with a sawtooth, so that it sweeps uniformly at a speed across the oscilloscope, so that each horizontal position across the position of the cathode ray tube is proportional to time, or it can be driven from an external source so you can actually electrically position the beam horizontally as well as vertically.

In this particular example of a Lissajous pattern, you would be displacing the beam both vertically and horizontally by means of externally controlled signals or external signals.

Q To the extent an oscilloscope has this internal electric circuit for moving the beam horizontally, it is like a television set in that respect, is it not?

A Like a television set?

Q Well, there is an electronic circuit in the oscilloscope which causes the beam to move in a horizontal path.

A That is correct. At a uniform speed.

Q And that is what happens in a television set, except it has this additional beam motion, in that the beam moves progressively down the face of the cathode ray tube? That is to say that occurs in the television sets?

A The television receiver displaces the beam both horizontally and vertically and also intensity modulates the beam, which is another difference in it. An oscilloscope can be intensity modulated, but the normal application is as a one dimensional signal measuring instrument.

Q Do you have a copy of the patent to Hurford, which is Patent 2,784,247?

A Yes, I do.

Q Is that a prior art patent which you considered in preparation for your testimony?

A I did consider this patent in preparation for

my testimony.

Q Could you describe what it discloses, sir?

A Yes. It describes a technique for the displaying on the face of a television picture tube an image which is derived from the vertical and horizontal sync pulses and whose position can be controlled by means of potentiometers 23 and 24, as shown in Fig. 1 of that patent. And -- well, at any rate, I think I have answered the question.

Q So it produces a symbol in time relationship to the horizontal and vertical synchronizing signals of the television, is that not correct?

A That is correct.

Q And it provides a voltage control for positioning that symbol horizontally and vertically, does it not?

A That's correct.

Q So to the extent and with respect just to the generation and positioning of a single spot, it is like the '507 and '598 patents, is it not?

A It is similar in respect to displaying a symbol on the screen of a television picture tube to one symbol generator of '507.

Q So it is like one symbol generator? As a matter of fact, it is very similar. It takes the output of these horizontal rate multivibrator 5 and ver-

tical rate multivibrator 8 and puts those into a coincidence gate to get that spot, doesn't it?

A That's correct.

Q And that is the way the patents do it, is it not?

A Functionally, yes.

Q Was that patent considered by the Patent Office?

A Was Hurford? Just wait a moment. I will check.

I believe so.

MR. GOLDENBERG: Your Honor, at this time I would like to hand up Defendants' Exhibit 11, which is a collection of the prior art considered by the Patent Office.

THE WITNESS: I didn't believe it was, and I don't find it in that list.

BY MR. GOLDENBERG:

Q That wasn't considered by the Patent Office, was it?

A No. I don't believe it was.

Q When you state you considered the prior art, did you consider the patent to Balding, Patent 3,122,607?

A I did.

MR. GOLDENBERG: Your Honor, that is Tab 2 in our exhibit.

BY MR. GOLDENBERG:

Q Does that patent show means for generating a symbol on the screen of a cathode ray tube?

A Yes, it does.

Q Does it show a circuit having a sawtooth and a pair of diodes back to back in the form of what you have referred to or what has been referred to in this case as the slicer circuit?

A I wouldn't carry the correspondence between those two quite that far. However, it does utilize a circuit in relationship to horizontal sawtooth.

Q Well, I am directing your attention to Fig. 1 --

A I know you are.

Q -- and there are a pair of diodes 17 and 18.

A That's correct.

Q And there is variable voltage input to that circuit, is there not?

A That's correct.

Q What do those diodes do?

A Well, they conduct when they are forward biased and they don't conduct when they are reverse biased, as all diodes do.

Q I direct your attention to Fig. 8 of the '507 patent.

A I have it.

Q That circuit shows a sawtooth wave input, does it?

A It does.

Q And there are a pair of diodes 47 and 48?

A That's correct.

Q Don't those diodes conduct when they are forward biased?

A They most certainly do.

Q And not conduct when they are reversed biased?

A They most certainly do.

Q Isn't there a voltage source on one side of those diodes?

A That sounds like an incomplete question.

Q Isn't there a voltage source on one side of those diodes?

A I don't know what you mean by one side. Do you mean left or right?

Q Let's say bottom, as shown on the drawing.

A Could you identify the specific point you are referring to? I will answer the question if you do.

Q I am referring to the legend that reads, "Zero arrow 6 v. volts."

A Yes.

Q That is a voltage source?

A Yes, in the range of zero to 6 volts.

Q In the range of --

A To one point of the common point of a pair of diodes.

Q Isn't there, if we return back to Fig. 1 of the Balding patent, 3,122,607, a voltage source to a common point on one side of the diodes?

A That is correct.

Q Would you say that there is any similarity between those circuits?

A There is some similarity between those circuits.

Q There is similarity in the way they are assembled, is there not?

A That is true.

Q There is similarity in the way they function, is there not?

A That's true.

Q Do you know whether or not the patent to Balding was considered by the Patent Office?

A I don't believe it was. I will look at the references cited. I don't believe it was.

THE COURT: Perhaps we can have a stipulation on that. It is a question of whether it is listed.

MR. GOLDENBERG: It is not listed, your Honor.

THE WITNESS: No, it is not.

MR. ANDERSON: I think that is correct, your Honor.

THE COURT: If they don't list it, it means they did not consider it, does it not?

MR. ANDERSON: If it is not referred to somewhere in the patent, there is no way to show it was considered unless it was a file wrapper, and I don't think it is indicated in the file wrapper in this case either.

BY MR. GOLDENBERG:

Q Could you state your understanding of the purpose of the circuit in the Balding patent that you have just been talking about?

A Yes. It is to display a symbol on the face of a television picture tube.

Q And it has a raster scan, does it not?

A That's true.

Q It moves that symbol around in time displacement with respect to the horizontal and vertical sync signals, does it not?

A That is correct.

MR. GOLDENBERG: Your Honor, I am skipping tabs 3 and 4 because that is '480 and '284 patents, about which we have already talked about their status as prior art.

THE COURT: All right.

BY MR. GOLDENBERG:

Q I am turning to tab 5, which is Balding Patent Reissue 25,756.

Did you consider that patent, sir?

A Yes, I did.

Q Could you state your understanding of the disclosure of that patent?

A Yes, it is a means for displaying on a cathode ray tube symbols which are intended to give a pilot some indication of his attitude and orientation. It is in fact intended as a display instrument for aircraft.

Q These symbols would move around over the screen of this television tube, is that correct?

A The symbols could be made to move.

Q Was that patent considered by the Patent Office?

A No, I don't believe it was.

Q Are you aware of any item of prior art of record in the Patent Office, for either one of the patents in suit, that showed the playing of a game on a television receiver where the players could manipulate spots to play a game?

A Yes, sir, I believe the patent issued to Mr. Goldsmith teaches a cathode ray amusement device. That is the title of it.

Q That is not a television receiver, is it, sir?

A No, it is not.

Q But you don't see any difference between that cathode ray device and the television receiver?

A Oh, indeed I do.

Q Then my question was a television receiver.

A I beg your pardon. Could you read the question back because I may have misanswered it. I may not have listened to it carefully enough.

MR. ANDERSON: There are two things about Mr. Goldenberg's book. One is it includes the one Rush patent, '829, I notice, but not the Baer patent, '480. Also I think the French reference in the file wrapper of the patent includes a translation, which was filed with the Patent Office on February 2, 1972. I don't see the translation in your book of prior art.

I am sorry, your Honor. The date is wrong, I understand. The '72 date is the date it was filed in the '480 file wrapper. It was filed on a different date in the '507 and '598 patent.

But a translation was filed of the French patent, which has not been bound. It is in the Patent Office records, but it is not bound in this book, which says on its cover, "Prior Art of the Record of Patents."

MR. GOLDENBERG: Your Honor, if that is an oversight, we of course apologize for that. With the court's permission we would like to supplement this exhibit.

THE COURT: All right.

MR. GOLDENBERG: With respect to the other point of Mr. Anderson, which is important since it is a point of contention between us, he says I have not included the '480 patent in this book of prior art considered by the Patent Office.

Indeed, I have not, because it was not considered by the Patent Office. It was not prior art of record.

THE COURT: Does the plaintiff say that it was considered?

MR. ANDERSON: Yes, sir, very definitely, your

Honor, and again I might note Mr. Goldenberg seems to have included the Rush patent, 3,497,829, in his collection of prior art, and I think it is like the application that resulted in the '480 patent, things that were referenced in the file wrappers and in the patents of the two patents in suit, '507 and '598.

MR. GOLDENBERG: No, it is not like the '480 patent. The Rush patent was referred to by the applicants in an argument presented to the Patent Office, and distinguished or something said about it in some fashion. That is not true of the '480 patent.

In the first place, during the pendency of the original applications for the parents of these two reissues, that is to say, the '284, the parent of the '507 reissue, and the '285, the parent of the '598 reissue, the '480 was not a patent. It was merely an application for a patent. It could not have been cited or referred to or considered by the examiner.

THE COURT: Because it was still confidential at that point?

MR. GOLDENBERG: Because it was a co-pending application. It did not have the status of known prior art at that time. It assumed that status when it issued as a patent, but it issued as a patent after the '284, after the '285 patent, and the examiner had already taken his action with respect to those.

We say it was prior art at that time not because of its patent status, but because Mr. Baer's work that has been testified about, including this

June 14, 1967 demonstration, established that work as a prior invention in accordance with the provisions of 102(g) of the patent statute.

So it was prior art, but the important thing there is that the examiner did not know that. There was no way that he could know it. There is nothing in the prosecution procedure, unless the applicant at that point voluntarily brings forward the facts of the matter and advises the examiner of the prior art status of this work.

So the examiner did not refer to it, could not refer to it. That is to say, at the time these applications were pending it was not prior public use. It was not a prior sale. It was not a prior publication.

The only status it had was that of prior invention. The examiner was never told that it was a prior invention, and he therefore could not have considered it. There is nothing in the record to indicate that he did, and indeed if you look at the Patent Office histories, as we will ask you to do, you will find that the '480 application was before one examiner, the '284 and the '285 were in front of another examiner.

They were making the same arguments to

these two different examiners to get their claims allowed in the '480 that they were making in the patent in suit.

Clearly it seems to me that if the examiner had been presented with that circumstance, he might have inquired, but he didn't know that.

THE COURT: What is the status of a prior invention as far as the requirement that it be disclosed? It simply must be disclosed, is that correct?

MR. GOLDENBERG: No, your Honor, it needn't be disclosed as long as it must not be abandoned, suppressed or concealed, and that is the language of the statute.

When you say disclosed, I think that is the only sense where it must be. If it is suppressed, then even though it is a prior invention it loses its status as prior art.

Understand that '480 and the prior work of Baer was not abandoned and it was not suppressed, was not concealed. It appeared --

THE COURT: I am sorry, I don't understand you so far.

MR. GOLDENBERG: I apologize, your Honor.

THE COURT: No, no. Abandoned or concealed or

suppressed by whom?

MR. GOLDENBERG: By the inventor. If a prior inventor, even though he meets all the statutory requirements of being a prior inventor, that is to say, he conceives first and reduces to practice, if he abandons his invention, if he suppresses it or conceals it, then he cannot beat another inventor in a priority contest, and that prior invention cannot be used to defeat another patent.

THE COURT: All right.

MR. GOLDENBERG: Now, that did not happen here because Mr. Baer's work was embodied in the application for the '480 patent.

THE COURT: Assuming that none of those three conditions apply then, does one who knows about such an invention and who is himself applying for an invention to which it is germane have the duty to disclose it?

MR. GOLDENBERG: In my view, he does, your Honor.

THE COURT: Is there some question about it as far as the law is concerned?

MR. GOLDENBERG: I don't believe there is any question. As your Honor is aware --

THE COURT: I know that generally -- I know this from a prior case that I tried -- the duty is basically one of fairness. I have forgotten the exact language, but it comes down to that.

So I know that much. Now applying that to the situation where someone knows about a prior invention, is there any doubt that the law requires disclosure of that prior invention to the patent examiner?

MR. ANDERSON: Your Honor, you have correctly

observed in that particular question that it is a matter of fairness, of relevance, of the evaluation of the second applicant of the relevance of the first.

In this case, the '480 application, the application that resulted in the '480 patent, and the two patents in suit here were all assigned to the same assignee.. There is a special set of rules and procedures that pertain in that case.

Professor Kayton, our next witness, is going to specifically go into the procedures and the practices of the Patent Office in that regard.

Dealing specifically with this case, the applicant referenced the '480 patent application, I believe, from the very beginning, and the examiner himself made further references to it from the very beginning. It is referenced both in the two parent applications and in the two reissue applications.

I think even more important than that on the second point that Mr. Goldenberg raises,-- and that is the significance of it and the differences between the two--at five or six places in each of the applications the applicant in the two patents in suit specifically referred to the application that resulted in the '480 and explained

the relationship.

Just let me point out one example.

THE COURT: Excuse me just a minute.

Do you dispute that, Mr. Goldenberg?

MR. GOLDENBERG: Yes, sir, I do.

THE COURT: I see. How could there be any doubt about it? Doesn't it show on the face?

MR. GOLDENBERG: No.

MR. ANDERSON: May I cite just one example, and he can perhaps address himself best to an example.

THE COURT: All right.

MR. ANDERSON: At column 16, line 11 of the reissue patent, 28,507, there is a whole paragraph and it is a specific reference to the '480 application.

The '507 patent in suit states, "Of course --"

THE COURT: Where are you now?

MR. ANDERSON: Column 16, line 11 of Reissue Patent 28,507, the first of the two patents in suit.

In the body of that paragraph, the next to the last line, at line 16, there is reference to serial number 126,966. That is the application

that resulted in the '480 Baer patent. So it is a reference to the application that resulted in the '480 patent, and the applicant stated:

"Of course, appropriate background or overlays can be employed. A third (or more) 'obstacle' spot can be used. If a player hits it, the coincidence pulse can be used to make all spots disappear or to change screen color, et cetera, as described in said patent application Serial Number 126,966. For chase games, coincidence of the pursuer and pursued can do the same thing."

Now, that is just one of several, but there can be, I think, no doubt that the applicant made frequent and specific and candid reference to the application that resulted in the '480 patent.

There is another one--

THE COURT: What is the -- maybe you are going to have testimony on this -- but is there a rule as to what you are supposed to put in the section there on the first page under "References Cited"?

MR. ANDERSON: Your Honor, yes, we will have testimony of that.

It is my understanding the examiner decides what goes on that list and what goes at the beginning

of the patent, as it appears in the '507 patent at column 1, line 10, where there is specific reference to the '829 patent, which Mr. Goldenberg included in his list of prior art, as well as to the pending application that resulted in the '480 patent.

I might say the examiner, by amendment, inserted the actual number in the '507, or the parent '284. application, by an examiner's amendment, in which he entered that number at that point and at five or six other places in the re-issue patent 28,507 by an examiner's amendment.

THE COURT: Is that that 828,154?

MR. ANDERSON: Your Honor? I missed your question.

THE COURT: You say that there is a reference to an application. What is the application 828,154 that appears on page 1 of '507 under "Related U.S. Patent Documents"?

There is one patent and one application listed. What is the application? The number is 828,154.

MR. ANDERSON: That is the serial number which resulted in the patent number 3,659,284, the parent '284 application of which this is a reissue.

THE COURT: Of which '507 is a --

MR. ANDERSON: Yes, just above it says "Reissue of" and then "Patent Number Issued", "Application Number", and "Filed" are the vital statistics on the parent.

THE COURT: I see. It all pertains to one background.

MR. ANDERSON: That all pertains to one.

I might suggest, your Honor, that our next witness will deal with this procedure and practice.

THE COURT: All right, we don't have to decide

anything on this at the moment. I understand that the '480 is not included in Mr. Goldenberg's book, and according to his view of it, there is a reason for that and according to you, it should be; but whether it is in the book or not isn't going to be decisive of any issue in the case.

MR. GOLDENBERG: No, I don't believe it is, your Honor.

MR. ANDERSON: On the other point, the French translation will be added?

MR. GOLDENBERG: We will add it.

I would note, your Honor, that in terms of advising the examiner, they filed the application to reissue the '284 patent, which resulted in the '507 reissue. That was filed on April 25, 1974.

In the first column of that patent it contains the reference to the application for the '480 patent.

Now, the '480 patent issued on April 17, 1973. Even though that patent had issued at the time they filed the reissue application, they did not update that information, letting the examiner know that those applications referred to in column 1 had now issued as patents and perhaps should be considered.

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So when the examiner had the application to reissue in front of him, he still did not know that the earlier applications --

THE COURT: Where in column 1, Mr. Goldenberg, is that?

MR. GOLDENBERG: Your Honor, this begins at line 45 and contains the reference to the applications which resulted in the '480 patent. That was presented to the Patent Office, as I say, on April 25, 1974.

The '480 had issued more than a year before that, but there was still no advice given to the examiner with respect to that.

MR. ANDERSON: Your Honor, I would like to object to this line of argument and, I think, the continuation of it at this time.

THE COURT: All right, I don't think it is objectionable necessarily, but we will -- well, actually, I suppose this is part of the defense, and so in a sense we are jumping the gun on it.

MR. ANDERSON: We will have Professor Kayton as our next witness, who will go into the procedures and practices in the Patent Office.

MR. GOLDENBERG: I have forgotten the question, if there is a question.

THE COURT: Yes, let's not ask the reporter to read it back.

As a matter of fact, you were just getting into the Goldsmith patent and it was at that point that Mr. Anderson made his observations.

MR. GOLDENBERG: Yes, that is correct. Thank you.

THE COURT: I remember. We were going to read back the question because the question was whether the Goldsmith involves a TV receiver or only a cathode ray tube.

BY MR. GOLDENBERG:

Q That is right, and I believe it is your testimony that Goldsmith involves only a cathode ray tube?

A That is correct.

Q An oscilloscope?

A That is correct, but I have forgotten what your question was myself now.

Q If you will bear with me for a moment, I will see if I can't pick up or go on.

THE COURT: Your real question was is there any difference in his judgment between a TV receiver and a cathode ray tube in this context, and he said yes, there was.

You said, "Well, I thought you treated

"them as the same in your previous answer."

MR. GOLDENBERG: Thank you, your Honor.

THE WITNESS: I didn't mean to treat them the same.

BY MR. GOLDENBERG:

Q You did not mean to treat them the same?

A No.

Q They are different?

A A cathode ray tube is the terminology, as I have already testified, of a large class of vacuum tubes, one of which is the electrostatic deflection that is appropriate for an oscilloscope application, and the other is the television picture tube.

Q You made reference to an electrostatic deflection. Is that the common deflection used in a cathode ray tube when used in an oscilloscope?

A Yes, it is.

Q The common deflection scheme when used in a cathode ray tube, when used in a television receiver, is electromagnetic?

A Magnetic.

Q Magnetic deflection, is that correct?

A That is correct.

Q In 1966, if you were going to provide a device for generating spots and displaying them on a television

receiver as used in the home, and in fact as there was about 60 to 70 million television receivers out there at about that time, would you have considered using electrostatic deflection?

A No, I wouldn't.

Q Would you have considered using anything other than raster scan to display?

A No, I wouldn't.

Q That is dictated by the realities of that circumstance, is it not?

A That's correct.

THE COURT: Would you go back again and tell me what is an example of electrostatic?

THE WITNESS: The oscilloscope display.

BY MR. GOLDENBERG:

Q Dr. Ribbens, if I misstate this, correct me, but in electrostatic deflection the cathode ray tube has inside of the tube two spaced metal plates, and they are positioned throughout the length of the tube. A voltage is applied to those plates, and that voltage changes, and as the voltage changes the electric beam is moved back and forth.

In electromagnetic deflection, the deflection of the electron beam is accomplished by coils, which carry a current, and those are wrapped around the outside of the tube.

Is that essentially correct?

A That is correct.

Q And laboratory instruments, oscilloscopes, for example, use this electrostatic deflection?

A That's correct.

Q And television receivers use electromagnetic deflection?

A That's correct.

Q That situation certainly has existed for at least 30 years, would that be correct, sir?

A I would say so.

Q Dr. Ribbens, if we put the matter of the '480 patent being considered by the Patent Office side -- that is a matter of dispute between the parties -- in any of the patents considered by the Patent Office was there any single piece of prior art which showed playing a game on a television receiver?

A No.

Q Was there any piece of prior art which showed the generation of movable symbols on a television receiver using raster scan?

A Yes.

Q What was that, sir?

A Doba is one.

I would have to go through the patents and find these. But Doba is one.

(There was a brief interruption, after which the following further proceedings were had herein:)

THE WITNESS: I have looked at so many of these in the last few days, your Honor, I have lost track of where they occur in my book.

BY THE WITNESS:

A And then in addition to that there is the Hermann patent, in which the display of movable symbols is on a cathode ray tube, but there is not a television receiver. But Doba does teach the displaying of a symbol on a television screen with the use of synchronizing signals.

BY MR. GOLDENBERG:

Q Does that use a slicer circuit or anything like a slicer circuit, as used in the '507 patent?

A No, it doesn't use a slicer circuit. It derives the timing information, that is, it derives its information, from a timing pulse, which is the synchronizing pulse, or the pairs of synchronizing pulses.

MR. ANDERSON: Is that a discussion of the Doba patent?

MR. GOLDENBERG: Yes. I am sorry if that wasn't clear.

BY MR. GOLDENBERG:

Q Now, the Hermann patent, you say that is not a television set?

A No, that is correct.

Q Does that have a raster scan display?

A No, it does not. I was mentioning that because it does teach a display of symbols on the screen which can be manipulated by persons outside on the face of the cathode ray tube.

Q Does that teach causing some event to occur when you have horizontal and vertical coincidence?

A No, no.

Q That feature however is present in the '480 patent, is it not?

A I am sorry, what feature is?

Q Having something occur when you have horizontal and vertical coincidence.

A That's correct.

Q But it wasn't in Hermann, was it?

A No, it was not.

Q That feature also was present in the Space War, was it not?

A What feature?

Q Having something occur when you have horizontal and vertical coincidence of two symbols.

A Space War? I believe Space War was an X-Y display.

Q I am not talking about television receivers, sir. It was a cathode ray tube display.

A I beg your pardon. I misunderstood your question. You were asking me if what --

Q If in Space War you had something occur when you had horizontal and vertical coincidence of two movable symbols.

A Yes.

Q That wasn't in Hermann, was it?

A In Hermann there is a coincidence detecting scheme, although it is a difficult patent to read. I think if you study it you find that there is an attempt by the trainee to move his symbol which he manipulates into coincidence with the symbol started by or operated by the trainer, the person who is attempted to train. They were attempting to develop an instrument for training marksmen.

Q Did you read the arguments made to the Patent Office about the Hermann patent by the applicants for the '507 and '598?

A No, I didn't.

Q Would it surprise you if I told you that one of the things they argued was that there was not horizontal and vertical coincidence in the Hermann patent?

A No, it wasn't.

Q You would not disagree with that, I take it?

A No, that is true.

Q Now, was there anything in the prior art considered by the Patent Office, where a ball symbol hit a ball symbol and the ball symbol hit changed his direction of movement?

A In the sense of a movable hit symbol?

Q Yes.

A I don't believe so, no.

Q And that was present in the Michigan and RCA pool games, wasn't it?

A What was present? There was an apparent collision between displayed symbols, but none of those symbols was under player control, other than the starting point of the cue ball.

Q I understand that, but I am saying that one moving symbol hits another moving symbol, and one of the moving symbols changed its direction.

A Yes.

Q That was present in the Michigan pool and the RCA pool, was it not?

A Yes, it was, in response to the solution of the equations of motion.

Q Nothing considered by the Patent Office showed that, did it?

A I haven't found anything.

Q Now, the RCA and Michigan pool -- let's take the RCA pool first. There a ball bounced off of a wall, did it not?

A That's correct.

Q As in a fixed hit symbol, right, as in the patent?

A Yes.

Q Was there anything in the prior art considered by the Patent Office which showed that?

A Not to my knowledge.

THE COURT: Which patent was it that showed something about it bouncing off a wall?

MR. GOLDENBERG: That was the RCA pool game, your Honor.

THE COURT: Oh.

BY MR. GOLDENBERG:

Q And that was true of the Michigan pool, except that there the pool game, the wall of the pool table, was not displayed? It was calculated and drawn on the face of the cathode ray tube with a wax crayon?

A With a grease pencil, yes.

Q But it would still bounce off of that thing,

assuming it was drawn accurately?

A Assuming it was drawn accurately.

THE COURT: May I ask a question that might be out of order but which has been on my mind in regard to this Michigan and RCA pool question from the very beginning?

What about the question of abandonment there?

MR. GOLDENBERG: I don't believe there is any question of abandonment. The statute with respect to abandonment speaks of prior inventions. If there is a public use or a sale or a publication, even though it may never happen again, the fact is it has entered the public domain.

THE COURT: I see. You are only dealing with abandonment if there never has been a public use.

MR. GOLDENBERG: Correct, your Honor. But if there is a public use or a sale or some disclosure of putting it in the public, giving the public access to it, the creator of it may himself never use it. For instance, and this happens all the time, a work is done, say at a university, by a graduate student, who writes a thesis describing his work.

When he describes it in the thesis, a

common practice is for a copy of this thesis to be deposited in the university library.

For many, many reasons the student may never go back to that work, but it has been done, it is recorded, and it is available to the public. That really is the test.

But if there is a prior invention which is not otherwise made available to the public, if that is abandoned, if it is suppressed, if it is concealed, then it loses its status as prior art.

THE COURT: Whether the applicant knows anything about this prior invention is not material to the question of prior art? It may be material to the question of fraud on the Patent Office but not on the question of whether it is indeed --

MR. GOLDENBERG: That is correct. The law charges the applicant with knowledge of the prior art whether or not he knows about it.

MR. ANDERSON: In this case these were just abortive efforts. It never led to a useful product. It was just a demonstration of a computer. We say that has significant bearing, but the fact that there was a demonstration is something that cannot be abandoned as such, for whatever was shown.

THE COURT: I wouldn't go into the merits of it at this point, but just as to the age of it.

Thank you.

BY MR. GOLDENBERG:

Q Just one last question sir: With respect to the electrical circuits used in the '507 and '598 patents, what would happen if there were to be a drop in the supply voltage of say 20 percent?

A Just off the top of my head do you want me to answer that?

Q Yes, sir. Would it affect the play of the game, or what somebody was seeing?

A I don't think that is a fair question, but I will try to answer it.

Q If you cannot --

A Well, I mean there are so many separate devices here, that if I were to talk about any one device perhaps I could come up with an answer. But, for example, if all the circuits are generating voltage from a common supply --

Q From a common supply.

A Then, if the power supply voltage changed by 20 per cent -- say it dropped by 20 per cent, which would be a common circumstance which would occur if you didn't have a regulated power supply -- then the slope of the ramp would decrease and the control voltage would decrease, so that those would tend to be compensating operations.

There would be some compensation in the operation of the device and the time delay would tend to be preserved. Whether it would be preserved exactly or not, I guess, depends on the skill of the designer in choosing components.

Q But it could conceivably affect the appearance or the play of the game?

A It could conceivably.

Q Is that true of the defendant's games?

A I knew you were going to ask me that.

That also was a little unfair, because I don't know what the tolerance limits are to digital

devices precisely. I would have to look them up in the Fairchild catalog, and there are a great number of devices. But there is a possibility of complete failure of the digital circuits if the power supply voltage falls far enough. There are tolerance limits on those devices.

Q Twenty per cent?

A Twenty per cent? There is a range of the binary voltage values -- they can have a range of 20 per cent, so I should suspect it might be less sensitive, could be less sensitive; but once again there is so much in a question like that that is impossible to answer without a careful analysis --

Q But there is a difference, sir, between analog and digital circuitry and their sensitivity to variations in the supply voltage?

A Once again it depends on the skill of the designer. It is possible to design an analog circuit in such a way that a change in the power supply voltage won't produce a change. In other words, if I scaled the linear ramp factor on the ramp, the same as I do on the control voltage, then by picking the bias voltages about which it operates, typically I would use zero, and there is a possibility of designing the circuit so that there would be no change in the display.

MR. GOLDENBERG: Your Honor, that completes our

cross examination of Dr. Ribbens.

THE COURT: All right.

REDIRECT EXAMINATION

BY MR. ANDERSON:

Q Dr. Ribbens, you testified that you had read the material cited by the defendants with respect to Michigan pool or the pool game that was demonstrated on the Michigan computer, is that right?

A That's right.

Q Did that information indicate what type of CRT display was used with the Michigan pool game?

A Yes. It was an oscilloscope point-by-point X-Y display.

Q Did that display include any horizontal sweep signals in demonstrating Michigan pool or the pool game?

A It did not.

Q Did it include any vertical sweep signals?

A No, it did not.

Q Did it use any horizontal synchronization information?

A No, it did not.

Q Or did it use vertical synchronization information?

A No, it did not.

Q Was there any raster scan as you described it in the course of your testimony here?

A There was no raster scan used in the Michigan pool. It was point-by-point display.

Q In Michigan pool was there any use of a timed relationship between pulses representing video information and then a synchronization signal?

A There was no timed relationship at all, other than the normal operation of the computer, which does not generate the signal voltages in relation to synchronizing pulses at all.

Q Now, in the usefulness of that type of X-Y point plotting display, can you compare that to a TV type display using horizontal sync, vertical sync and sweep circuits in timed relationship?

A Well, in the first place, the information which was available at the computer output consists of sets of numbers which determine the position of a symbol to be displayed on a screen. There is no way in which a television type receiver could respond to those types of control. That implies a particular type of display, an oscilloscope. An oscilloscope beam is reflected in proportion to the vertical and horizontal displacement information which is generated.

In addition to that, there is an implied restriction on the number of symbols which can be displayed, and I think that was well demonstrated by the information which I read about Michigan pool from the deposition that was taken, in that the number of symbols

which were displayed -- excuse me. There was a maximum rate at which the information could be displayed on the face of the cathode ray tube.

Q Now, would you explain in a little bit more detail what is involved in putting a single point on the screen in an x-y display of the type that was used at Michigan to demonstrate their computer?

A Yes. The information would be read out into a pair of registers, as to the magnitude of the deflection, both vertically and horizontally on the face of the oscilloscope cathode ray tube, and that information would have to be obtained by solving the equations of motion in the computer.

Then at some instant of time in the computer operation, that data would appear at the output and would activate the display. The display itself requires some time before just accepting the data from the registers and the time at which the spot can be displayed -- a settling time, for example.

Q Generally what kind of time intervals are we talking about? How many spots, for example, could such an x-y display show in the equivalent of a frame, perhaps, of a TV screen?

A I believe that it is on the order of 40 or 50 or so microseconds.

Q What is that?

A I believe it was on the order of 40 or 50 microseconds.

Q I'm not certain now that it is clear just how, but when you take the computer information in these registers that you refer to, how do you convert that into one spot on the screen of this cathode ray tube?

A I don't think I completed my answer. Actually, the information that exists in the registers are a set of binary numbers, one for the vertical position and one for the horizontal position. Those numbers would be converted to an analog voltage by a device typical to analog conversion, and those voltages, the analog voltages, would be applied to the deflection plates of the cathode ray tube after a suitable amplification, and it caused the beam to be displaced to the spot on the screen at which it is to be displayed.

Q How is the spot actually formed then?

A The beam, the cathode ray tube beam, would be turned on once the voltages had been applied to the deflection plates of the cathode ray tube. Then you could turn the beam on for some instant of time to generate an instant, that is a spot of light, on the face of the cathode ray tube.

Q Now, to display the next spot of light on the cathode ray tube, would the same procedure be re-

peated?

A Yes. The information concerning the horizontal and vertical position of the next spot would be read from the computer, placed in the register, converted to analog voltages, and then deflect a beam to the corresponding spot and turn the beam on.

Q From your understanding of the Michigan demonstration of their computer, would there be any set relationship, location-wise, on the screen between the first spot that was displayed and the second spot that was displayed?

A Those would just be determined by the particular motion of the balls involved, and those would come as a result of solving the equations of motion. So one symbol might be one spot on the screen, and the very next one might be at an opposite point on the face of the cathode ray tube.

Q Does that differ from the TV raster scan display?

A Yes, it does.

Q Could you use, perhaps, Plaintiffs' Exhibit 79, this little line demonstration, to explain just briefly how in a CRT of the point plotter type, as was used at Michigan to demonstrate their computer, the points might be generated to make a demonstration of a game-like pool?

A For each spot that is to be displayed, it is necessary to have a pair of numbers, one to give the horizontal position and the other to give the vertical position. That pair of numbers would be available in a pair of registers, circuits which contain voltages, which can be interpreted by the equipment to generate an analog voltage, which is proportioned to the desired displacement,

that is, the desired quadrants, of a point on the screen.

In contrast with a television display, the beam continues to sweep and to display a spot. The only information required is a time delay following the vertical synchronizing pulse and the horizontal synchronizing pulse.

Q That is in television?

A That is what I said.

Q In the point plotting display, for example, where might the first, second, third and fourth dots be illuminated on the screen if you were making a picture?

A They could be any place.

Q Absolutely any place?

A Yes. It depends on which spot occurs in the program counter sequence. That is the sequence of the operation of the digital computation.

Q And based upon your statement that it takes 40 to 50 microseconds to display a signal spot, using your knowledge of cathode ray tube displays, roughly how many discrete spots could be displayed using that kind of display device?

A If that were the only factor that influenced the time between display, then you would have the reciprocal of that number, which would be the number per second. That is something like 25,000.

Am I doing the arithmetic right?

Q A second?

A In a second. And a 30th of that, if we are displaying the equipment of television frame rate of 30 frames per second, you possibly could have on the order of a thousand points for the equivalent time interval of a television picture.

Q And using the technique of the '507 and '598 patents of time pulses for controlling the raster scan display, roughly how many discrete points might you illuminate on the screen, just in a rough number?

A Well, the vertical resolution of a television picture tube is some roughly 500 lines. You have the same order of magnitude of horizontal resolution element, so it is roughly on the same order of magnitude of 500 times. 500, which is 25 times 10 to the fourth, or a quarter of a million, roughly.

Q A quarter of a million versus roughly less than a thousand?

A Maybe a thousand.

Q In the case of a point plotting display?

A That's correct.

THE COURT: It is a quarter of a million what, distinct spots?

THE WITNESS: Resolution elements. It is better

to think of it as resolution elements, because the television display is continuing to sweep in a continuous manner. It doesn't stop along its path.

BY MR. ANDERSON:

Q That is with respect to the display that was used in Michigan to demonstrate their computer. What is the situation with respect to the display used at RCA to demonstrate their computer, if you know?

A They used a similar X-Y plotter. That is as opposed to using raster scan.

Q Did they use horizontal sync or vertical sync signals in their display to generate the RCA computer?

A No, they didn't.

Q Did they use horizontal and vertical sweep signals to demonstrate a raster on the screen?

A No, they did not.

Q Did they use the timing of video information pulses relative to horizontal or vertical sync to locate spots and cause them to move on the screen?

A They did not.

Q With respect to the RCA demonstration of the computer, would your other discussion of the differences between a point plotting display or a vector display on the one hand and a TV type display using horizontal and vertical sync information apply equally well to the RCA and the Michigan pool?

A The same limitations are available. I think the techniques may be different in the two cases, but the important distinction still is that neither the Michigan pool nor the RCA game, or actually a demonstration more than a game, neither of those used synchronizing information. It was necessary for them to read numbers out of the registers in the computer and then activate the X and Y display on the cathode ray oscilloscope.

Q With respect to your understanding from the documents that you were given relating to Space War, what kind of display was used in the demonstration of a computer using a Space War?

A That was also an X-Y type of plotter and did not use raster scans specifically.

Q Would that have all of the differences that you have described with respect to the demonstration of a Michigan computer and the RCA computer?

A Yes, it would.

Q What does that mean in the reality of trying to make a game that could be made and sold or used for a coin operated business?

A Well, certainly there are difficulties in reaching the type of display that you want, that is, having a sufficient computer capacity. But it certainly is not compatible, that is, it is not possible to take the computer game or demonstration and make that available for television, because in order to display the symbols on a television it is fundamentally necessary to generate the synchronizing pulses and then generate the signals in timed relationship to those synchronizing pulses.

So there is no direct way of taking the output from the computer and displaying it on the tele-

vision receiver.

Q Could one have physically removed the x-y display apparatus used in these three computer demonstrations and have placed the TV set in place of it?

A No.

Q Or a raster scan display, and operate the system?

A No, he could not, because the television display requires synchronizing pulses and requires that the signals which give rise to the symbols being displayed on the screen have a timed relationship to those synchronizing pulses.

Q Were there any synchronizing pulses used in generating the display in any one of these three computer demonstrations, Space War, the pool demonstration at Michigan or the pool demonstration at RCA?

A No, there were not.

Q With respect to the play of the game in the '507 or the '598 patent, was there in any one of these two computer demonstrations a hitting symbol that was under player control in the course of playing the game or demonstrating the computer?

A No. The only interaction a player had was to initiate the motion of the cue ball.

Q What did the player do after that, from then until the time when all play stopped?

A Sat there and watched. Those are the pool games.

THE COURT: What about the cue stick in the Michigan game? Did that have a cue stick?

THE WITNESS: That gave him a choice of direction for the cue ball. He could rotate that by means of a joy stick.

THE COURT: What did that have to do with control?

THE WITNESS: Only to initiate the play. He had no way after the play had started to maneuver any of the symbols to intercept the motion of any of the other symbols.

BY MR. ANDERSON:

Q Was the cue stick in that demonstration, the Michigan pool, designed to move actually the way the cue stick moved in play?

A No. In fact, I don't believe it to have been

shown on the same portion of the screen at all. It just gave direction.

Q It could have been in the corner of the play and would not affect the game?

A That's right, it didn't matter.

Q And it was controlled by a completely different instrument in the demonstration, not the same instrument that controlled the balls?

A That is correct. The ball motion was determined by the solution of the equations of motions and the stick orientation was determination by an external set of knobs.

Q So the actual visible cue had nothing to do with the way the operator set the demonstration in motion, except that by rotating a knob, that cue appeared to rotate and acted as a weather vane to show the direction it was pointing?

A That's right. The player selected a direction for the cue stick, and then initiated the play, and from that point on he was an observer.

Q In RCA pool, the demonstration on the RCA computer, as I understand it, the operator touched the actual screen, the CRT display, with a light pen, is that correct?

A Yes, that is what I read in the depositions, that's correct.

Q After that, what was his further participation until all the balls stopped moving?

A He was an observer until all the balls stopped moving.

Q In the demonstration called Space War, what if any action did the player take to try to intercept something corresponding to a ball in the course of play?

A Well, the player was attempting to avoid contact with the missiles fired by the opponent's space ship.

Q What happened if a missile came into apparent contact with the space ship on the CRT display in the Space War demonstration?

A As I understand it from reading the depositions, that constituted a score for the other player and was registered by a blooming or change in the apparent geometry of the space ship which was hit by the missile.

Q From your reading of the documents that you were provided, was there any indication that there was any bouncing of one player control or one hit symbol off of a player-controlled symbol in any way in the game, demonstration, Space War?

A Not from any of the depositions I have read or any of the other information, either a description by the Journal that was cited by the defendants, nor from any of the other documents that I have been able to read about

Space War.

THE COURT: What happened again when one space ship hit the other?

THE WITNESS: That constituted a score. There would be a display of the hit on the space ship.

THE COURT: There would be no bouncing of the spots?

THE WITNESS: No bouncing, no. In fact, it was an object of the player in each space ship to avoid being hit.

BY MR. ANDERSON:

Q Dr. Ribbens, in the course of your cross examination Mr. Goldenberg asked you about a lot of specific electrical circuits and components, such as D-type flipflops, and J-K flipflops. Do you recall that?

A Yes, I do.

Q He also asked you about specific differences between the electrical circuits and the electrical components in the accused products and in the patents in suit.

A Yes.

Q Do you find any of those differences that he had you point out to be of any substantive importance to the ultimate game functions, as you have described them, with respect to the accused games and the patents in suit?

A No, I don't. I find that those devices function essentially to generate signals which bear a time relationship to the vertical and horizontal synchronizing pulse. The mere choice of doing it by counting pulses from a stable oscillator is not significantly different from the choice of an equivalent analog time delay generator.

Q Do the electrical circuits that are used in the accused games and the electrical circuits taught in the patents accomplish the same functional results, in your opinion?

A They accomplish the same functional results in that they generate video pulses which bear, as I said before, a timed relationship to the vertical and horizontal synchronizing pulses.

Q Do they accomplish those same functional results in substantially the same way?

A Yes, I believe so.

Q Using exactly the same means?

A Yes, I believe so. There is a means for displaying symbols on the face of a television receiver by generating signals, which bear a unique timed relationship to the vertical and horizontal synchronizing pulses.

If you were to examine the outputs of these devices with an oscilloscope, you would find that they consist of sequences of binary valued voltages, either in the case of Exhibit 91-A and 91-B, which is Paddle Ball and Pro Tennis, as well as the signals which would be observed in the Odyssey game or as taught by the '507 and '598.

Q Given the teachings of the '507 and the '598 patents as your starting point and in the context of the 1970s, are any of these so-called differences between the accused devices and the patent circuits anything more than matters of conventional alternative electrical design choices?

A I don't believe they are, and as a matter of fact, I teach my students that there are often many ways to accomplish a result which are basically the

same, or in terminology that you perhaps would use, substantially the same.

Q I would like you to refer to the colored drawings which you prepared of Paddle Ball and of Pro Tennis. Take Plaintiff's Exhibit Number 91-A first, which is the Paddle Ball circuit diagram.

A Yes.

Q On the left side you have been asked by Mr. Goldenberg quite a few questions about the circuit that you have enclosed in the broken orange lines and labeled "Impart. Distinct Motion (Vertical)".

Do you recall that cross-examination?

A Yes, I do.

Q You were asked about specific inputs. There is one input there on the left side at the bottom of Exhibit 91-A, going into each of the four little paddles or blocks, or whatever you would call them, marked F, with a bar over it, 9, or F9.

Can you explain how that input functions in this part of the circuit of Paddle Ball?

A Yes, that helps to distinguish between which paddle, either the left or the right, is active in the act of coincidence.

Q Can you explain a little more how that functions to do that?

A Yes, the F9 and not F9 signals serve to separate the displayed screen into right and left halves. So alternately when we have one signal we are operating, for example, F9, we are operating on the right-hand side, and not F9, we are operating on the left-hand side.

Q Does that mean that if the ball is on the left half of the screen, three of these controls marked "Left" are effective or something of that sort?

A Yes, that means that -- recall now, for example, what we are discussing with respect to this circuit is the influence on the vertical motion of the ball. That vertical motion is operable when coincidence is reached.

That is derived by the clock inputs to the D-type flip-flop. It is the D-type flip-flops which measure the state of these circuits, labeled A6A, A6B, and B6B at the instant of coincidence.

So there will either be a signal on F9 or not F9, activating one side or the other.

That is equivalent to selecting one paddle or the other.

Q Does that particular selection of one panel or the other for operation of the "Impart Distinct Motion" circuit that you have outlined in the Paddle Ball diagram, Plaintiffs' Exhibit 91, have any general counterpart in the '507 reissue patent, perhaps as shown as Plaintiffs' Exhibit 89, or any other part of the patent?

A Yes, it is equivalent to the change of state of the flipflop, if you will.

Q In what respect do they have correspondence?

A It is a binary valued signal. There is a pair of binary valued signals, and that is similar to the behavior of the flipflop, that is, the flipflop activates either one vertical control or the other vertical control and this operates in substantially the same way.

Q I would like you to refer to the other colored diagram of the accused game, Pro Tennis, which is Plaintiffs' Exhibit 91-B.

Does this use a similar technique for dividing the field in left and right halves to shift control?

A Yes. In fact the notation is the same, F9 and not F9, which has the same significance in terms of the timing operation along the horizontal line.

Q You were asked also, I think, about the serve - in Pro Tennis and Paddle Ball, and in particular with

respect to Claim 44, which recites a means for serving.

Can you point out in these two marked circuit diagrams, 91-A and 91-B, what circuit components actually cause the ball to be served?

A Yes, I haven't marked these with color, but there is a group of components. In the center of Exhibit 91-B, for example, is a device called a serve delay. That is a time delay, 555 timer.

It is activated by a miss. Whenever the ball goes off the screen and corresponds with the horizontal blanking signal, that would identify that the ball was missed by the players. This would activate the equivalent of serve.

Q Is that generally true of both 91-A and 91-B?

A I beg your pardon; yes, sir, you did ask me about both.

Yes, sir, those are roughly the same.

We have to detect a coincidence between the ball horizontal and the horizontal blanking signal. That would be picked up with component E6C, which activates through E6B and E6A to the serve delay timer.

Q The serve delay timer, is that F4?

A Yes.

Q That is generally in the center of Plaintiffs' Exhibit 91-A?

A That is correct.

Q Just below the yellow line and above the orange lines?

A That is correct.

Q You referred to a particular part of the '507 patent, I believe, in response to Mr. Goldenberg's question about the target shooting game, and the fact that the patent suggests a moving symbol in a target shooting game. Do you recall that?

A Yes, I do recall that.

Q In the description which you read, was there a description -- I am sorry, that is in the '480 patent. I misspoke. It is in column 12, I believe, of the '480 patent, starting at about line 57.

A Column 12, did you say?

Q Column 12 of the '480 patent.

A Oh, yes, right. I am there.

Q With respect to that target shooting game as described in that paragraph about which Mr. Goldenberg interrogated you, how many dots does that refer to as actually appearing on the screen in that paragraph?

A This would just be the target that would be appearing, the hitting symbol target; that is, there wouldn't be an equivalent displayed hitting symbol.

Q So there would be only one dot on the entire

screen in playing that target shooting game?

A Yes, that is correct, and the photocell gun is only intended to detect the presence or absence of that spot. So if you have the gun pointed at the screen, at the instance you pull the trigger, if the displayed spot is in the field of view of the photocell, it will generate an output which indicates a hit.

If there is no such spot, that means you had the rifle or the gun incorrectly pointed.

Q What is the effect of a hit, if you recall, in the '480 patent with a target gun?

A I don't recall the exact detail. I would have to look at it.

I believe the target is removed from the screen.

Q Mr. Goldenberg asked you various questions about the prior art included in his book of prior art of record in the Patent Office, Defendants' Exhibit 11. I will hand you a copy of the translation of the French patent, which ends in the digits '470.

Can you just briefly describe the French patent and how it relates to what we have been discussing here?

A Yes, I just need a moment to read it to refresh my memory. I have looked at this before, as I have testified.

(There was a brief interruption, after which the following further proceedings were had herein:)

BY THE WITNESS:

A This is a means for displaying a symbol on the face of a cathode ray tube, which can be moved around the face of the tube by an operator. It is called an index in the translation.

BY MR. ANDERSON:

Q This is a reference cited by the examiner?

A Yes, it is cited by the examiner, that is correct.

Q In the French patent, was it possible to move the spot, or whatever it is called, on the screen of the display?

A Yes.

Q Was the display a TV type display?

A That is what I don't remember now. I have to look for a moment and see.

(There was a brief interruption,
after which the following further
proceedings were had herein:)

BY THE WITNESS:

A Oh, yes, it does.

I have looked at so many of these that I can't just instantaneously glance at it and remember the details; but yes, it does.

BY MR. ANDERSON:

Q With respect to the Hurford patent, 2,784,247, the one Mr. Goldenberg asked you about and is the first patent in his book entitled "Prior Art Patents Upon Which Defendants Rely", do you have the Hurford patent?

A I have it right in front of me.

Q Referring to sheet 1 of the drawings, does Hurford show a line on the screen of a television set?

A It is a symbol whose proportions can be adjusted. So it could be made to be like a line, for example.

Q Does it teach any interaction between two or more lines or symbols?

A No, it does not.

Q With respect to the claims which you have been referring to in the course of your testimony and the elements in those claims, including means for generating hit and hitting symbols, for detecting coincidence and causing a change of motion, and the rest of the claim elements about which you have testified, is the Hurford patent any more relevant as you understand it or pertinent than, for example, the French patent 1,180,470, cited by the examiner?

A It doesn't teach any of the aspects that we have been discussing in terms of generating hit and hitting symbols and detecting coincidence and causing the motion of the hit symbol to change. So no, it does not offer any more relevance than the French patent.

Q With respect to the Balding patent, 3,122,607, about which Mr. Goldenberg asked you various questions, I would like you to turn to sheet 2 of that patent,

which shows two fields with speckled areas and some symbols.

A Yes.

Q THE COURT: Which one was that?

MR. ANDERSON: It is in the Balding patent, your Honor. It is the second one, patent 3,122,607, which is bound in the defendants' book called "Prior Art Patents Upon Which Defendants Rely". It is under tab 2.

THE COURT: Yes.

MR. ANDERSON: I have asked Dr. Ribbens to refer specifically to the drawings of that Balding patent and more specifically to sheet 2.

BY MR. ANDERSON:

Q Dr. Ribbens, is that the display which you understand is seen when using the Balding symbol generator?

A Yes, it is.

Q Does the Balding patent, as you read it, relate to the playing of any games?

A No, it does not. In fact, I believe it is intended to be used as a display device. The teaching of the patent calls for it as a display device, albeit using television raster scan, but it is a display device intended to help a pilot maintain his speed relative to a command speed.

Q Can you just generally describe the symbols which show in sheet 2 of the Balding patent and what information they might convey or how they might move?

A Yes, there is a triangular symbol, which is formed by this combination circuit described on sheet 1, and that would represent, for example, a fixed objective for the pilot, that is, the command speed.

Then there is a rectangular symbol, which according to the teaching of Balding or Hurford, would be made to move and could give command information to the pilot.

Q In the Balding patent, as shown in sheet 2 of the drawings of that patent, '607, is that triangle movable by the pilot in the normal course of operation?

A Not as taught by Balding's patent.

Q The little rectangle above it, is that movable under any direct control of the pilot?

A No, other than his control over the speed of the aircraft.

Q So if he changes the speed of the aircraft, that little rectangle will move?

A That is right.

Q In what direction will it move, as you understand it?

A It can move up and down.

Q I would like you also to refer to the second Balding patent that is bound in the Defendants' Book of "Prior Art Patents Upon Which Defendants Rely," Patent Number Re. 25,756, and in particular, perhaps, sheets 1 and 2, which show the displays, as I understand it, that would be generated by the visual cue generator of Balding.

A Yes.

Q Can you explain what is shown in those various figures and sheets 1 and 2 of the Balding re-issue patent?

A Yes, those are a display of some symbols which are intended to give the pilot visual information, which would aid him in landing. It is intended as a display device for aircraft.

Q Is there any control by a player or an operator of symbols on the screen other than by perhaps pointing or rolling the airplane?

A No, the only control the pilot would have is the maneuvering of the aircraft to change its attitude. Assuming the device is operating correctly and the aircraft's attitude is being measured, then the display would change.

Q Is there anything in the Balding Reissue Patent about manipulating symbols or spots or the like to produce interception and produce some change of motion or anything of that sort?

A No; there is not. That is why I concluded this did not constitute prior art over '507 or '598,

Q Again with respect to the prior art of record in the Patent Office, as shown in Defendants' Exhibit 11, the book of prior art of record in the Patent Office, do you consider the Doba or French patents or any of

those patents to be at least as relevant as the two Balding patents?

A I don't consider that any of them teach the interactive game playing as taught by '507 or '598. I don't consider, frankly, any of these as being prior art teaching the interactive play of a game on a television receiver using synchronizing pulses and other symbol generators which generate signals and time relationship to synchronizing pulses, some of which are under player control and some of which are under game control.

I don't consider any of these as teaching that.

Q Mr. Goldenberg asked you several questions about what might happen in the accused games or the circuits of the two patents in the event of a drop of 20 per cent in the line voltage.

Would such a drop of 20 per cent in the line voltage have any effect on the operation of a television receiver?

A Yes, it would. It would cause the display to shrink typically, and it might cause the device to go out of synchronization.

It depends on the television receiver and how it has been designed, but there is a possibility for the receiver itself to malfunction.

Q In the line voltages you have had experience with commercially, what range of voltage fluctuations might normally be experienced?

A In terms of the power supply voltage? You are talking about 110 or 117?

Q Yes, the 110 that we are all familiar with that provides our lighting and so forth.

A Of course, that depends on what part of the country you are in, but it can fluctuate. In our laboratories it fluctuates as much as 15 per cent or perhaps 20 per cent.

Q Dr. Ribbens, Mr Goldenberg has asked you quite a few questions about the counting circuits of the accused products and asked for differences between those and the circuits of the two patents in suit.

In the play of the games, as you understand the accused games, are there any other functions performed by the counting circuits in addition to the function of measuring time in the manner that you have described with respect to the two patents in suit?

A Basically all of the information which is presented in the television set is presented in a time relationship to the synchronizing pulses. The counter is there as a device which is utilized to measure time intervals. There are other devices which, in the ac-

cused games, measure time intervals as well, for example, the 555 timer, but basically all of the counting devices are counting pulses which are being derived from a stable crystal oscillator and function to measure a time delay.

Q I think you started to allude to some probing of the output of the games. If you put a probe with some sort of an indicator on the output of the accused games and on the outputs of, say, Odyssey or the games made in accordance with the patents, can you describe generally what you would actually see on an oscilloscope and how, if at all, the two would differ in the accused games and in the games as exemplified in Odyssey?

A You would see the same video waveform. I have probed these games myself before with an oscilloscope.

You see synchronizing pulses of one polarity and you see video pulses of another polarity. As you vary the control of the hitting symbol, the time delay to the displayed symbol of the corresponding hitting symbol changes in relationship to both -- excuse me, with respect to the vertical synchronizing pulse.

As the ball moves across the screen of the television picture tube, you can see the time delay

following the vertical synchronizing pulse to the video pulses change. In effect it is possible to interpret the behavior of the display totally in terms of the oscilloscope display, and that is true in either of the accused games or the Odyssey game.

Q In the context of those games, is there any clear dichotomy or separation between analog and digital technique and circuits?

A No, not really. There are some devices here which one might tend to find in digital instrumentation, but they can also be used in an analog sense. For example, a counter can be used to generate a wind or a step approximation to a ramp, or you can equally well use an analog circuit, an operational amplifier with the right feed back path or a bootstrap integrator, to generate a ramp.

So that with respect to the characteristic applications of the games as represented by Exhibit 91-A and 91-B, there is no important functional difference between them.

Q Could any of these games, in your opinion, be considered digital computers?

A No.

Q I would like you to refer to the definition of computer contained at paragraph 7 of the agreed Glossary in this litigation.

Page 7, at the top of the page, there is a definition of computer, and starting at line 6 of the definition, it states:

"The major elements of a computer in--

"clude a memory for storing the computer program."

Do any of the games involved here have such a memory?

A No.

Q "Other information needed to control the operation of the computer."

Is there any such thing in any of these games?

A No.

Q "Or a memory for storing the accepted information and the results of mathematical and logical operations performed by the computer."

Is that involved in any of the games?

A Not really, no.

Q The next part of the computer definition is "A central processing equipment for performing arithmetic and logical functions."

Is that a part of any of the games involved here?

A No, it is not.

Q The next element of the major elements of a computer in the definition is, "Apparatus for receiving the information from an external source, the input device, and supplying the results to an external device,

"the output device."

A No, that is not in here.

Q "And a control unit for controlling the operation of the other computer elements under control of the computer program."

A No.

Q Dr. Ribbens, I would also like to hand you a copy of pages 17 and 18 of the agreed Glossary of Terms in this case. This is a definition agreed to by the defendants who are present here and the plaintiffs, and I would like you to refer to the definition of television receiver.

According to that definition,-- and I will read it -- a television receiver is, "A device for receiving television signals in a standardized form, separating those signals into their various parts, the video and synchronizing signals, and using the signals so separated for displaying images on the screen of a television picture tube."

Do you agree or disagree with that definition of television receiver?

A I agree.

Q Is that, as you understand it, consistent with the definition that you have used throughout your testimony?

A Yes, it is. The definition that I have used for a television receiver is a device which receives a video waveform, including the synchronizing pulses and the video information.

I see no inconsistency between this definition and the definition that I have used.

Q That completes the --

A I might just make one statement before I go on.

Q Excuse me.

A That is with respect to the computer and we talk about the possibility of storing information. I wouldn't want to have someone point out that I didn't correctly identify that it is possible to hold signals for a short period of time.

I would hesitate to call that a memory, but at the very closest there is some D-type flip-flops in the accused games, which for a short interval of time between hits of the paddles store a set of binary voltages; but I still say that this device in no way constitutes a digital computer.

Q In that respect, Dr. Ribbens, there is also references in that computer definition to inputs and outputs.

A There are no inputs or outputs in the sense of a computer in this.

MR. ANDERSON: That completes the redirect,
your Honor.

THE COURT: Will there be lengthy recross,
Mr. Goldenberg?

MR. GOLDENBERG: No, your Honor.

RECROSS-EXAMINATION

BY MR. GOLDENBERG:

Q Are you absolutely certain that there are no memories in any of the defendants' games?

A Well, as I said before, to the extent that these D-type flip-flops can hold information for a short interval of time.

Q That is the extent of your answer. You don't know of any other memories?

A In the sense of holding information of a program nature, there are certainly none.

Q Would you look at Plaintiff's Exhibit 42-A?

A I don't believe I have a copy of that.

Q Let me show you that.

A By the way, my answer was with respect to 91-A and 91-B because that is what I was asked; but I will be very happy to look at this exhibit.

Q Well, look at 42-A.

That wasn't what you were asked, sir, but that was what your answer was intended, was 91, is that right?

A Yes, I made the qualification for myself, and perhaps incorrectly so, that I was thinking about 91-A and 91-B.

Q That is the extent of your answer?

A No; no, I would say that none of these devices function as a digital computer. None of the games which --

Q No, sir, that wasn't my question to you.

Is there any memory capability in the electrical circuit you have in front of you?

A 42-A and 42-B, it has been a while since I have looked at this, so I will have to look at it.

(There was a brief interruption,
after which the following further
proceedings were had herein:)

BY THE WITNESS:

A Yes, I believe there is. There are some devices here which weren't identified. They were custom integrated circuits.

I believe the labeling on components D1 and D5 is called "Horizontal Component Memory" and "Vertical Component Memory".

BY MR. GOLDENBERG:

Q Do you know what a PROM is?

A Yes, I do.

Q Tell me what it is.

A A PROM is a device which stores information. It is a memory device, read-only memory, which can be programmed.

In fact, PROM is an acronym for Programmable

Read-Only Memory.

Q Do you know whether or not there are any PROMs in that circuit which you have in front of you?

A Well, I don't know offhand. I am going to have to look at it for a minute.

(There was a brief interruption,
after which the following further
proceedings were had herein:)

BY THE WITNESS:

A Part of the problem is these components labeled C1 and C4 are identified, but D1 and D5 have not been identified to me, nor has D2. So I have no way of knowing.

BY MR. GOLDENBERG:

Q So you don't know?

A I don't.

Q You really don't know anything except about these Exhibits 91-A and 91-B?

A No.

Q And that is what your testimony has been about?

A No, no, no, that is not true. That is not true.

What I meant was that my response was
in terms that I was thinking of 91-A and 91-B.

Q All right, sir.

A I will state categorically, however, that none

of the games which I have seen function as a digital computer as defined by this text.

Q I haven't said anything about digital computers. I am talking about memory.

A Okay.

Q And an ability to store a program.

A Yes.

Q That seems to be present, as you understand it now, in this Plaintiff's Exhibit 42-A, is that correct?

A There may be. I don't have any definitions. There is no indication of what those devices are.

Q That is the defendant Seeburg's Pro Hockey game, isn't it?

A Pro Hockey, yes.

Q Do I understand your position is that this Michigan pool, this RCA pool, and Space War which use digital techniques, counting, calculating, adding, subtracting, is not good prior art; but on the other hand, these games which used digital techniques, counting, calculating, those are infringements?

A Which use calculating and computing? They are not really digital computers, Mr. Goldenberg.

Q No, I said digital techniques, sir.

A What do you mean by digital techniques?

Q Well, sir, there is a clock oscillator in

there, isn't there?

A Yes, there is.

Ribbens - recross

Q That puts out a stream of pulses?

A That is true.

Q Those pulses are counted?

A That is true.

Q They are stored at various times and comparisons made, aren't there?

A That is true.

Q That is what computers do, don't they?

A Computers do far more than that.

Q I understand that. They are capable of far more than that.

They have an extensive memory capability. They can put things into memory and take them out again.

A They certainly can. They make calculations according to an algorithm which is stored.

Q That memory capability varies from computer to computer, doesn't it?

A It certainly does.

Q But they use digital techniques and they count pulses and they add pulses?

A They operate with binary-valued voltages and they perform logical operations and arithmetic operations.

Q I just want your position, sir. I don't want to argue with you.

Ribbens - recross

That kind of thing is not good prior art, in your view; but on the other hand, the games which use the same techniques, those infringe?

A Let's understand something, Mr. Goldenberg. Computers don't constitute prior art because they don't prepare signal in a format which is suitable for display on the television receiver. They prepare an output which can be read from a set of registers.

They don't provide synchronizing pulses and they don't provide any format which can be connected to a television receiver.

Q If I were to point out to you that in 1954 and 1967 there was a way of doing that, you might have a different view of the matter?

A No, I wouldn't, no.

Q I didn't think you would.

A It is possible to take the information, but that is not what was done.

Q I understand that, sir.

A And it does not constitute prior art.

Q I understand that, sir, but I appreciate if you would give me your position that these circuits which use these digital techniques are not prior art on the one hand, but when applied to television receivers, they

infringe, is that correct?

MR. ANDERSON: Your Honor, I object.

THE COURT: Sustained. I think you are really putting a dichotomy to him which is false according to his lites.

MR. GOLDENBERG: All right, your Honor. I withdraw the question.

I have no further questions.

THE COURT: All right.

MR. ANDERSON: I think I have no further redirect your Honor.

THE COURT: Dr. Ribbens, congratulations on the conclusion of your testimony.

THE WITNESS: Thank you.

THE COURT: It certainly has been extended.

(Witness excused.)

THE COURT: We will take a reces until about five minutes to four.

(There was a brief recess, after which the following further proceedings were had herein:)

Kayton - direct

MR. ANDERSON: Your Honor, the plaintiffs will call Professor Irving Kayton.

IRVING KAYTON,
called as a witness by the plaintiffs herein, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. ANDERSON:

Q Please state your full name for the record, Professor Kayton?

A My name is Irving Kayton. I have no middle initial.

Q Where do you reside?

A 800-25th Street, N.W., Washington, D.C. 20037.

Q What is your employment?

A I am a professor of law and the director of the Patent Law Program at the George Washington University Law Center in Washington, D.C.

Q Do you have any other professional activities at the present time?

A Yes. I founded and now direct an organization called Patent Resources Group, which presents continuing legal education, seminars, conferences, and programs in various aspects of patent law, patent office practice and the like.

Q Will you describe in general your duties and activities as Director of Patent Law at George Washington University?

A Yes. I teach patent office practice and patent law, and I am also charged with developing courses in patent and patent-related areas, and over the past 10 years we have developed some 18 or 19 credit hours worth of courses in patent and patent-related subjects.

Also, as a professor of law I teach civil procedure and federal jurisdiction.

Q Can you generally describe the types of courses and perhaps some of the courses that you have operated as the director or president of Patent Resources Group, Inc.?

A Yes. They are divided generally into two categories. The first are courses designed to train people to enter the practice of patent law, one of which is a patent office examination course to train people to become licensed to practice before the Patent Office, and related courses in patent office practice for neophytes.

In addition, in the second category we give courses that run the entire spectrum of patent practice, including patent licensing, advanced patent office practice for the more experienced practitioners,

and courses in patent litigation and the like.

Q For how long have you been a professor of law at George Washington University?

A Well, I have been a full professor since 1967, and I started at George Washington as an associate professor in 1964.

Q Will you trace your employment prior to becoming an associate professor of law at George Washington University in 1964?

A I was employed as a patent attorney with the General Electric Company in New York City from approximately the beginning of 1960 until the middle of 1963. Prior to that I was a patent attorney with the Link Aviation Division of what is now the Singer Company. That's 1958 to 1960.

From 1952 to 1958 I was a patent attorney and in the earlier stages a patent trainee at the Bell Telephone Laboratories.

Q Did all of your experience at Bell Labs, what is now Singer Company, and G. E. involve patent activities and patent legal work?

A Yes, it did.

Q Will you briefly describe your academic training, Professor Kayton?

A I received a Bachelor's degree in mathematics

from Cornell University in 1951.

I received the L.L.B., now the J.D., from New York University in 1955.

I received the Master of Laws and J.S.D., the Doctor of Science of Law, from Columbia University in 1964 and 1967 respectively.

Q Have you written any published works in the area of patent law?

A Yes.

Q Can you just briefly describe one or two of those?

A Most recently I co-authored and edited a six volume set of books entitled "Patent Preparation and Prosecution Practice." That is a set of volumes which is a text designed to train people to practice before the Patent Office.

Prior to that I co-authored and co-edited what is now an eight volume set of materials, entitled "Patent Law Perspectives," which really is a monthly service dealing with the current developments in all aspects of patent law and trade secret law.

I left the activity participation of that project approximately three or four years ago. At that time it was five volumes. Now it is eight volumes. It keeps getting bigger.

I also am the author and compiler of a case book called "Patent Property Cases and Readings," which is used in several law schools, those that teach patent law and patent office practice.

THE COURT: Incidentally, how many law schools teach patent law? I ask because it was not taught where I went, and I don't think it is now.

THE WITNESS: I would imagine of the 160 law schools that are ABA or American Association of Law Schools recognized, not more than 40 have any kind of course, and probably not more than 20 have a course that is restricted to patent law.

The case book is not a big money maker.

MR. ANDERSON: Your Honor, we have a more detailed summary of Professor Kayton's qualifications and publications, which has been given to the defendants. - It is Plaintiff's Exhibit 98.

I will hand a copy to the Court.

BY MR. ANDERSON:

Q Professor Kayton, what have you done to prepare to testify in this action?

A I have read several things. I have read the pleadings. I have read the file histories, the file wrappers of the re-issue patents in suit, the parent patents from which they came, and I also have read the file histories of the '480 application and its parent application.

I also have read a set of requests for admissions, defendants' requests for admissions and plaintiffs' response, and I don't remember whether it was first, second or third at the moment.

I have attended the trial since last Monday morning, and I also have read the transcript of the first day of the trial that was held several weeks ago.

There may have been some other things, but I don't at the moment recall them.

Q Professor Kayton, I would now like to have you discuss patent office procedure.

First, perhaps you can explain the "Manual of Patent Examining Procedure" and the relationship of the "Manual of Patent Examining Procedure" to Patent Office practice.

A Yes. The "Manual of --"

MR. GOLDENBERG: Your Honor, I would object to this

question. I am not too sure that it has any relevancy at all to the issues with which we are concerned here.

I would grant that the specific actions taken with respect to these applications are matters in which the Court surely is interested. Those actions, however, are spelled out in the file wrappers, which are exhibits in these cases.

I believe that whatever those actions were, they speak for themselves.

The attorneys, to the extent that they believe them to be important, can have reference to them. Generally what goes on in the Patent Office, I am not aware that it is of any moment, and it is more of this elaborate explanation and background which doesn't seem to get us very far.

THE COURT: This is in an area which I find confusing. Evidence of custom is admissible as bearing on what happened in a particular instance. Yet, in order for that evidence to be admissible, there must be evidence to show that the custom was followed on the occasion in question.

I learned that the hard way in a case of mine that was reversed on appeal about a year ago. It seems to me an entirely circular kind of reasoning. I still don't understand it. But I do think that evidence of

custom could be helpful to the Court.

MR. GOLDENBERG: Your Honor, this is not evidence of custom. This is evidence of Patent Office practice. That practice is spelled out in the two documents, again, to which the parties can make reference. One of those is the "Rules of Practice of the United States Patent Office" in patent cases.

THE COURT: Doesn't it have the same purpose as proof of custom in that it is proof of procedure, and the arguments will be that the procedure must have been followed in the instance before us? That is the same thing you argue when you offer proof of a business custom.

MR. GOLDENBERG: If the Court sees it in that light.

But I say that the word "custom" is inappropriate.

THE COURT: All right. I am using "custom" in a very generic sense, and I think "regulations" --

MR. GOLDENBERG: As I say, your Honor, the rules of practice establish the procedures in the Patent Office, and in addition to that there is a publication called the "Manual of Patent Examining Procedure", which is a Patent Office publication, primarily to guide the examiner in what he does.

THE COURT: It is not going to hurt me to hear this. I frankly would rather hear it in shorthand form than to have to read the whole manual without knowing what is pertinent and what is not.

MR. GOLDENBERG: I do not think either side would ask you to do that.

MR. ANDERSON: I would like to say that I understand, or I recall, Mr. Goldenberg relied on a particular section in the pretrial brief of the MPEP, as it is usually called.

MR. GOLDENBERG: That is right. I don't think I am saying anything different.

BY MR. ANDERSON:

Q Professor Kayton, do you recall the question, and can you answer it?

A Not quite.

Q I indicated that we would now consider the matter of Patent Office procedures, and as a threshold to that I asked if you would explain the "Manual of Patent Examining Procedure" and its relationship to standard Patent Office practice.

A Yes. The "Manual of Patent Examining Procedure" is a set of guidelines in great detail, promulgated by the Commission of Patents, directing the examiners in the Patent

Office with respect to how the rules of practice, that is, the Code of Federal Regulations, dealing with patent cases are to be followed in detail in the Patent Office, and indeed how the statute, 35 U.S.Code, the Patent Statute, is to be followed by the examiners in the Patent Office.

Now, the MPEP does not have the status of rules in the sense that the rules of practice, 37 Code of Federal Regulations, does, that part 1 does, because the Secretary of Commerce did not sign it and authorize it as rules.

Nonetheless, not only are these the detailed guidelines which examiners must follow in implementing the rules in the statute, but it is what the Patent Office requires patent attorneys and agents to know when they are licensed to practice.

Kayton - direct

In the courses which I teach, preparing people to practice before the Patent Office, I use the Manual of Patent Examining Procedure" as the basis for what they must know.

Moreover, analysis of the examinations given by the Patent Office shows that the questions asked of the applicants are virtually all from the "Manual of Patent Examining Procedure."

Now, it may be that some attorneys may look at the Manual in specific points and say these detailed guidelines, which are much more detailed than the rules of practice, are inconsistent with the rules. Sometimes they do that.

But what is important, I think, for our purposes that this is precisely the way the Examiners must function and how the practitioner must respond.

Q Would you please trace the proceedings with respect to a typical patent application as it goes through the Patent Office?

A I assume you mean in a general way.

Q In a general way, yes. Please.

A Well, when a patent application is prepared, which means the detailed specification, which includes at least one detailed embodiment of the invention, discussion of the

Kayton - direct

prior art and illustrative embodiments, with claims describing at the end of the specification that which the applicant believes comprehends his invention for which he is looking for property protection -- when those are prepared and an oath is prepared, coupled with a fee to the government for going through the bother of examining the application, when that is all put together it is mailed to the United States Patent Office.

One of the first things that happens is the application is looked at with respect to the technological subject matter that it comprehends, particularly what the claims are, what technology the claims are directed to.

It is then classified in accordance with the huge hierarchical scheme of classification of all technology, and is sent to an examining group, an examining art unit, which handles that kind of technology.

When it gets to that examining unit, it is assigned to an examiner to start the process of examining the application under the many provisions and constraints of the statute, the rules and the "Manual of Patent Examining Procedure," in order to determine whether what has been submitted is indeed patentable.

Q You might describe the examining people who then are assigned this task.

A Yes. In the case of utility patents as distinguished from design patents -- and we are concerned with utility patents -- the examiners are all degree-holding individual and are assigned to specific technologies broadly on the basis of their training, either by way of their degree background or, if they have subsequent experience.

So obviously an electrical invention will get into a unit where electrical engineers or physicists would examine it, and a chemical invention would be fed into a group where chemists or chemical engineers were to examine it, and a mechanical device would get into examiners with appropriate training for that.

Sometimes the class or technology might be a hybrid kind of thing, and they do the best they can to have people of appropriate training there.

Q Now, when the Examiner is assigned a case, can you describe the examination that he undertakes in the course of handling that patent application? What does he examine, and how?

A Well, he has to consider the application from the various aspects that will result in having either the application rejected because it doesn't meet the criteria for issuability, or, if it does, make sure that it does.

Kayton - direct

As a consequence, then, what he will do is to first examine it preliminarily for formalities to make sure that the oath is in proper form and that it has been signed correctly, and then he gets into the substantive considerations.

First of all, he will want to make sure that the claims in the application are actually supported by the detailed description in the specification. He cannot allow a claim based on a disclosure of an embodiment that is inoperative, for example, or really does not describe something comprehended by the claims.

He also will examine the library of technical literature that is available to him to see if he can find prior art which would anticipate or render obvious the claimed invention. That library is similarly organized in this multi-volume index or heirarchy in which it is divided and sub-divided into categories, and it is in fact much like the West Key System, except instead of fact and law as the entering argument, the technological terms are the entering argument.

In addition, in examining for prior art, he is charged with determining the prior art that he must use against those claims where there is a common assignee of another application, which claims related subject matter.

For example, if two applications by different inventors or different inventive entities, but commonly owned, are filed, and if those inventions are obvious, one relative to the other, he is charged with permitting only the earlier one of those to issue as a patent, if the earlier one is otherwise unobvious over the prior art.

That is another class of prior art, which the "Manual of Patent Examining Procedure" expressly requires him to examine.

There are other things that he must consider. Mr. Goldenberg alluded to Section 112 of the statute earlier. There are several criteria in Section 112 that a patent application must meet. The claims must be specific and definite, because the claims really are much like the metes and bounds set forth in a deed.

Fuzziness is not acceptable. It must be structurally set forth. If there is ambiguity, the examiner must reject the claims as indefinite. If the applicant has not specified, if it comes out, the best mode contemplated for carrying it out, Section 112 says the claims must be rejected.

Or, if the examiner believes that what the applicant has claimed is not really what the applicant considers his invention actually to be, he must reject it.

Similarly, Section 112 includes the requirement that an inoperative disclosure cannot be the basis for the allowance of claims.

There are other possibilities. I have mentioned in general several, and some of the ones I have mentioned are applicable, I believe, in the prosecution in this case.

But he does do that.

He may also say, "Well, you are trying

"to claim too many inventions for one filing fee. The Government is entitled to a filing fee for each invention. Therefore, divide it up into more than one."

That is more of a formal nature than a substantive argument.

After he completes that examination, he mails what is called an office action, reflecting the results of his examination and search, to the applicant's attorney.

Q Professor Kayton, before you go into the office action, there was discussion earlier, I think this morning, with respect to whether there was any Patent Office requirement that each claim of a patent application must read on each embodiment disclosed in the application.

Can you comment on any requirements in that regard?

A No, there are not. I might point out that in my discussion of what the specification contains, I think that really does lay the basis for an understanding of it. This specification, as the patent office requires it, must set forth certain things, that are either statutorily required or required by the Patent Office to aid in the examination.

Now, one of the things the Patent Office wants is a discussion of the background of the invention,

the context of the invention, and in that sense what the prior art is, to the extent that it enables an understanding of the specific embodiment to be better comprehended by the examiner.

Well, obviously no claims are going to read on the prior art for the background of the invention that is disclosed.

Sometimes, in addition, illustrative embodiments, which do not get to the heart of the issue of the invention but are related, are disclosed. Very often this would be the place where the co-pending applications, that are commonly owned, would be set forth, if they indeed described the take-off point of the invention that is claimed.

Consequently, there is often material in a specification in which no claim will read, and it is not designed to -- no claim is designed to comprehend it at all.

Indeed, sometimes there may be a very, very detailed embodiment of many embodiments shown, which, if claimed in that detail, would never be infringed, because it would have such an incredible detail.

Well, that, too, may not be specifically claimed, but it may be comprehended by a broad claim reading on several embodiments, comprehending several embodiments.

So there is no one-to-one correspondence as such between everything in the specification and the claims.

Q Would you describe the office action which -- that is the point you were at in your description of the procedure, the office action which the examiner prepares.

A Right. The office action will set forth his findings. If he considers prior art anticipatory or prior art rendering the claims obvious or any of the things I discussed, an inadequate disclosure of an operative

embodiment, he will set those things out.

In the process, if he finds certain claims to be allowable, that is, patentable over the prior art, he will in that action so indicate.

If he considers certain others patentable or allowable, but for certain formalities, he will so indicate.

If at that point he considers certain claims to be unpatentable because of specific prior art, he will similarly indicate, and if there are any minor details, if the points aren't drawn according to the rules that draftsmen follow, and so on, he will enter those non-substantive objections as distinguished from a rejection, a substantive rejection, in which he says "Claims will not be allowed."

Q What is the next step in the process, and what is the timing of the various steps that occur after the examiner sends out his office action?

A The applicant's attorney typically has three months to respond. Under the statute, it may be no more than six, but there is an abbreviated procedure that has been in existence quite a while, wherein "a shortened statutory period to respond" is provided, and within three months after receiving the office action the attorney must respond to the issues raised by the examiner.

Now, he can respond in several ways. Of course, if the claims are allowed, he is satisfied in that

regard. If the claims are rejected, he may amend the claims so that he may put them in a condition which he considers allowable over whatever the basis was for the examiner's rejection.

Or he may simply disagree with the examiner and say, "I am not going to amend my claims. I traverse, and this is why I disagree with you." And he will lay out reasons why he disagrees.

He may point out that the claims were in fact patentably distinct over whatever part was considered.

He then prepares that and mails it to the Patent Office, whence it gets back to the examiner.

Q And after the applicant has responded by filing this responsive letter, what happens next in the Patent Office procedure?

A The examiner will once again consider -- well, the examiner will consider what is called the applicant's amendment, or really remarks. It is not always amending anything, but it is typically called an amendment, which includes sometimes actual amendment of the specifications or claims, and always includes remarks directed to the issues.

He will consider them, and either he will be convinced by what is presented, either convinced that the amendments to the claims render them patentable, or he will be convinced that the attorney's arguments about the patentability

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of those claims are correct and allow them, or he will disallow them.

He will also conduct another search and prepare a second office action, which typically, under current procedure, is called a final rejection.

Now, if at that point he considers all the claims to be allowable, he will so indicate that to the applicant's attorney, tell him all the claims are allowable and the patent will issue. But if there is disagreement on anything, he will issue a second office action, which will be called a final action.

Q Now, you mentioned in the initial comments on the examiner's procedures that he inspects the oath to determine if it conforms to Patent Office requirements.

Is that true both of original oaths and oaths with respect to re-issue applications?

A It is true with respect to both, but in the case of a re-issue application, there is a much heavier duty of examination, and, in fact, it has to be examined by the primary examiner, which would be the supervisor of the regular examiner.

Q After the second office action, then, did I understand the application may be allowed by the examiner? In the event it is not, what courses of action does the applicant have?

A Well, he has basically three courses of action open to him. If he feels that the examiner is correct, he will either cancel claims or amend them in the way that the examiner suggests. He can accede to the examiner's rejection, and thereby put the case in condition for allowance.

Now, if he feels that he and the examiner are at an absolute stalemate on the technology or conceivably the law, he can appeal that decision to the Patent Office Board of Appeals, which is a quasi-judicial administrative body. If there is no satisfaction at that level, he can proceed to appeal to the United States Court of Customs and

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Patent Appeals, or, alternatively, to the United States District Court for the District of Columbia, one or the other.

That takes care of two of the three courses of action.

THE COURT: Is there any difference at all in the choice of the courts there? For instance, where would you go judicially from an unsatisfactory result there? In the case of the Court of Customs and Patent Appeals, is that considered to be on the same level as the Circuit Court of Appeals?

THE WITNESS: Yes. That is on exactly the same level as a United States Court of Appeals, and the certiorari to the Supreme Court from the CCPA may be sought directly.

THE COURT: If you had gone to the United States District Court, whence would you appeal from an adverse decision there?

THE WITNESS: To the Court of Appeals for the District of Columbia.

THE COURT: I see. All right.

BY THE WITNESS:

A Well, we talked about two of the three courses of action. He can appeal it, or you can accede to to the examiner.

Now, the third course of action is one that would be taken under certain circumstances, such as if he feels, if the attorney feels, that the examiner and he really are not in disagreement, but they are not really talking on the same frequency and just another go around would resolve the issue. Or, if at that time, he discovers or it is called to his attention that there is prior art he was unaware of before, that he would like the examiner to consider, to enhance the validity of whatever patent he gets, he can file what is called a continuing application. That is, during the pendency of his first application he filed another application, but it is the same application, except he may change the claim somewhat if he feels that will focus the issues with the examiner, and he will call the prior art to the examiner's attention, but he has to pay another filing fee.

Under the statute he has an absolute right to have another examination for another fee.

If he does that, then an opportunity for rediscussion or re-examination based on the newly-discovered prior art comes about.

The new application typically, then, replaces the old. It has the same effective filing date as the first one because of the co-pendency and the statutory provision for it.

THE COURT: What is the amount of the fee?

THE WITNESS: The filing fee is \$100, plus an additional amount, dependent upon how many claims and what kinds of claims are introduced.

At the issuance of the patent there is another issue fee, which is \$65.00, plus an amount based on the number of pages that are printed and drawn, and so on.

THE COURT: Is the amount per claim -- for instance, in a suit like this, what would your Patent Office charges be?

THE WITNESS: Well, it is not very big. You are entitled to ten claims free and one independent claim free. Anything more than that, it is \$2.00 per claim for dependent claims and \$10.00 per claim for

more independent claims, and if you add claims during the prosecution, you have to pay more for those.

BY MR. ANDERSON:

Q Professor Kayton, is there any provision by which the applicant's attorney and the Examiner can have a personal interview while an application is pending on the patent?

A Yes. There is specific provision in the "Manual of Patent Examining Procedure" setting forth four such interviews, and it is detailed enough to say that you can't have any on Saturdays, and such thing as that.

Q Is there provision in the "Manual of Patent Examining Procedure" or any custom with respect to meetings with Examiners other than with respect to pending patent applications?

A Yes, there is.

Q Can you describe what that is?

A Yes. Keeping in mind that the Examiners are people with skill in the technology and spend their time searching prior art, sometimes it is the case that before an application is filed, and I give this only by way of example, an attorney may discuss with an Examiner, who is an Examiner in the technology that he expects to file a patent application on, what areas, what classifications

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might be appropriate, and this is provided for, as a matter of fact, in the "Manual of Patent Examining Procedure" at Section 713.02, in which it expressly specifies that --

MR. ANDERSON: Excuse me, Professor Kayton.

Your Honor, I have prepared a copy of pages 97 through 98.1 of the Manual of Patent Examining Procedure, which includes Sections 713 through 713.04.

THE WITNESS: What revision is at the bottom of that page, what revision number?

MR. ANDERSON: This is Revision 46 that I have handed to the Court, October 1975.

THE WITNESS: It really doesn't matter because it has been the same for a long, long, long time, but I just wanted to make sure that we are holding the same papers.

BY THE WITNESS:

A I am referring to the second column at the bottom of page 98, first paragraph under 713.02, where it says:

"Prior to filing, no interview is permitted. However, in the examiner's discretion, a limited amount of time may be spent in indicating the field of search to an attorney, searcher, or inventor."

This is a common occurrence. Where it says "No interview is permitted," what is expressly meant there is that it may not be the case that an attorney can argue the technical or other merits of an application on file and

discuss them with the examiner. He may do so, however, subsequently.

THE COURT: What percentage of the patent examiners are lawyers?

THE WITNESS: What percentage? I would say a small percentage are lawyers. Many of them went to George Washington University because of the physical proximity to study law, but there are very few of them doing that now. The main thrust of the activity is technological, so it is not a requirement, and I would say a small percentage. If I had to guess, I would say not more than 10 percent.

BY MR. ANDERSON:

Q Professor Kayton, you have described the procedure down to a point where a final or issue fee is required. I gather if the issue fee is paid, the patent then issues. Is that the normal procedure?

A Yes, it issues in due course.

Q Can you explain in detail what the significance of the procedure is that you have just described with respect to a pending patent application in the Patent Office?

A The whole set-up in the detailed Manual of Patent Examining Procedure is designed to provide a process that will properly justify a presumption of administrative correctness. It is the procedure designed by the Patent

Office to try to insure that only valid patents will issue.

This procedure is the basis for that part of the patent statute which states that a patent is presumed to be valid and each claim of a patent is presumed to be patented independently of the other claims.

So the point is it is a very detailed, logical set of rules and procedures, which, if followed and are effective, justify the validity of the patent and the presumption upon which it is based.

Q What if the procedures are not followed in a specific case? What is the result of that?

A The presumption is rebutted, and that certainly happens sometimes. The presumption is based upon the examiner finding the most relevant prior art and rendering his decision based upon that.

Q I think you indicated you have studied the file history of the '284 original patent that is involved in this civil action, is that not correct?

A Yes, I have.

Q From that file history of the '284 patent, can you tell what prior art was considered by the examiner during the prosecution of that patent application?

A Yes, I can quite easily.

Q What do you require, Professor Kayton, in order to do that?

A I can actually make reference in a shorthand way first to the '284 and the '285 patents, which I thought I had with me but I do not.

I can start off by showing things in the issued patent itself and then further show in the file history things which the patent itself could not show on the subject of what the examiner considered as prior art and the basis for his allowance of that application.

MR. GOLDENBERG: Your Honor, I object to the word "considered" in the witness' response to this.

"Considered" involves a state of mind, a thought process which the examiner had. If the witness wishes to testify that the examiner cited something or something was called to his attention, I would have no objection to that kind of answer.

THE COURT: I will take it in that sense, that the witness when he says "considered" means either that the matter was brought to his attention or that he discussed it. If that is the case, then that will be made apparent, too, I take it.

MR. GOLDENBERG: All right, your Honor.

BY MR. ANDERSON:

Q I will hand you, Professor Kayton, a copy of U.S. Patent 3,659,284 and ask you to state the prior art the examiner considered in the prosecution of that application, as can be told from the document itself.

THE COURT: I don't have '284, do I?

MR. GOLDENBERG: Your Honor, I think you do have it as tab 3 in Defendants' Exhibit 9.

MR. ANDERSON: Your Honor, here is a loose copy.

THE COURT: All right, thank you.

'284 is the predecessor of '507?

MR. ANDERSON: That is correct, your Honor, and it is actually Plaintiff's Exhibit 1-A in the action.

THE COURT: Yes, I have it here in my old book that I have completely forgotten about.

Let me give you this copy back then, Mr. Anderson. I won't need it.

BY THE WITNESS:

A There are two places in the patent which will indicate prior art which either was actually considered by the examiner or which he was charged to consider.

To begin with, on the front page of the patent, the left-hand column, where it states,

"References cited", there is the list of Goldsmith, Althouse, and so forth. Those are patents that came up during the prosecution of this application, and if my memory serves me correctly, those were all prior art references which the examiner found, cited, and commented on in some way.

There is another place where prior art appears in this patent, which the examiner was charged with considering, and that is listed in the specification itself. Particular reference should be made to column 1 of the specification, immediately past the drawing.

There are two places specifically that should be looked at. One is the very first paragraph that says, "This invention relates to the subject matter disclosed in application Serial Number 126,966."

That application, it states, was a continuation of an earlier application, 697,798, now abandoned. That reference is to the application for the '480 patent.

It is also important to note that farther down in that column it states, at lines 38-40, that "This application --" from which the '480 patent came, -- "is assigned to the assignee of the application being examined," that is, the application of the '284 patent.

That statement in the specification about

it being commonly owned --

THE COURT: I am sorry. I didn't find that.
What line was that?

THE WITNESS: We are still on column 1, and
we are at line 37, where it says, "Serial Number --"

THE COURT: I see, yes.

BY THE WITNESS:

A Then on the very next line, it says, "And
assigned to the assignee of this application."

That, of course, was in the application
which the examiner, in this case David L. Trafton,
examined in order for the '284 patent to issue. He
therefore knew from this that there was an application
commonly assigned.

Moreover, if we were to look in the
file history of the application of this patent, you
would see that the first paragraph that I made reference
to at the top of column 1 was entered into the application
and thence into this patent by the examiner himself by
what is called an examiner's amendment. An examiner's
amendment typically is filed shortly before the issuance
of a patent to make sure that all details of prosecution
have been cleaned up. Rather than have another inter-
change with the attorney, he will typically get the
attorney's approval and will enter the amendment him-

self.

Moreover, in that prosecution not only did he himself insert that paragraph, but he in fact updated the information about the '480 application by introducing the correct continuation serial number because the '480 patent had originally been filed as an application and then immediately before its issuance, a continuation was filed and the parent abandoned for precisely one of two reasons I suggested before, namely, discussion of prior art.

So the examiner in this case not only entered those amendments, but went through the specification in at least five or six places to update the serial number to the continuation application serial number, which resulted in the '480 patent.

This means that the examiner was aware that there was a commonly owned patent application in existence which, as his amendment states, related to the subject matter of the application under examination.

Under the requirements of the Manual of Patent Examining Procedure, which are embodied in at least two places which I will refer to in a moment, he was charged with determining whether the claims in the '284 patent application, that is, the application on which '284 issued, were patentably unobvious over the

invention of the '480 application, that is, patentably unobvious over the invention claimed in '480. The requirement that he does this is a very special requirement, and it only applies in the case of commonly assigned applications. If they are not commonly assigned, he is still charged with searching for other applications which may be to the same invention, but there he is charged with doing it for the purpose of setting up a proceeding whereby the Patent Office will determine who is the first inventor of the inventions claimed by the two applications.

Where there is a situation of commonly assigned applications, that is not his function. He must get the assignee to declare which of the two inventors is entitled to a patent on the invention. If the common assignee refuses to do that, the examiner is obliged to reject the claims in the application.

Of course, the attorney can argue to the examiner, "Well, you are wrong. These two applications are to different inventions," and he can appeal that to the Board of Appeals in the CCPA; but if he does not do that and he refuses to say who is really entitled to protection for this invention, the examiner is charged to reject the claims in the application which are patentably obvious over the claimed invention of the earlier one.

Specifically in the Manual of Patent Examining Procedure, Section 305.02, which is at page 22.1 --

MR. ANDERSON: Your Honor, I have a copy of page 22.1 of the Manual of Patent Examining Procedure.

BY THE WITNESS:

A 305.02 says that, "Where the applications by different inventors --"

That is the situation that we have here.

'480 is invented by Baer and '284 by Rush -- "Where the applications by different inventors but of common ownership claim the same subject matter or subject matter that is not

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patentably different, questions of interference therebetween and with third parties are handled as indicated in 804.03 and 1110.01(b)."

804.03 appears at page 120.1 and is most illuminating. It amplifies in significant detail what the procedure is.

MR. ANDERSON: Your Honor, I will hand out to the Court a copy of page 120.1 and 120.2 of the Manual of Patent Examining Procedure.

BY THE WITNESS:

A 804.03 sets forth Rule 78(c). There is something of interest to be gained here, I think, in understanding how the Manual of Patent Examining Procedure really works.

If you look at 78(c) which would appear as 37 Code of Federal Regulations 1.78(c), it says:

"Where two or more applications or an application and a patent naming different inventors and owned by the same party contain conflicting claims, the assignee may be called upon to state which named inventor is the prior inventor."

78(c) says he may be called upon to do it. 804.03 says he must be called upon to do it. The Commissioner has said that that is a requirement. Although 78(c) says the Commissioner may do this, the Commissioner says the examiner must do it.

It appears there. It says, "In view of 35 USC 135, it is necessary to determine priority of invention whenever two different inventive entities are claiming a single inventive concept, including variations of the same concept, each of which would be obvious in view of the other. This is true regardless of ownership."

Then at the bottom of that paragraph it says in effect, "Things that would be effective where you have the same inventor will not apply in the case where you have different inventors and a common assignee since the basis for refusing more than one patent is 35 USC 102 or 103."

That is to say, this statement means that this is prior art under Section 102 and Section 103, dealing with novelty and non-obviousness.

Pursuant to that and finding his basis in a statute, the Commissioner then proceeds to say that, "Accordingly, the assignee of two or more cases of different inventive entities containing conflicting claims must maintain a line of demarcation between them. If such a line is not maintained, the assignee should be called on to state which entity is the prior inventor."

Then, "If the assignee does not comply with this requirement -- " I am going on to 120.2 -- "the case in which the requirement to name the prior inventor was made will be held abandoned."

BY MR. ANDERSON:

Q Professor Kayton, you went from Section 305.02 of the Manual, which also cited a second section of the Manual in addition to 804.03. That is namely Section 1101.01(b).

Can you state how that bears upon the practice with respect to commonly owned patent applications?

A Yes, 1101.01(b) appears at page 166.

MR. ANDERSON: I will hand up a copy to the Court of page 166 of the Manual of Patent Examining Procedure.

BY THE WITNESS:

A That appears about one third down of the first

column, under the title "Common Ownership."

This says, "Where applications by different inventors but of common ownership claim the same subject matter or subject matter that is not patentably different, interference there between is normally not instituted since there is no conflict of interest," meaning economic interest, of course.

"Elimination of conflicting claims from all except one case should usually be required. The common assignee must determine the application in which the conflicting claims are properly placed. Treatment by rejection is set forth in Section 804.03," and that, of course, is the section that we read from.

BY MR. ANDERSON:

Q Professor Kayton, there have been several references to an interference in the various sections that you have read. What is an interference under Patent Office practice?

A An interference takes place when two different inventors are claiming the same invention; that is, they are not patentably different from each other. They may be identical or they may be obvious, one relative to the other. Each of them may have an application on file for that invention, or it may be between an application or a patent that has issued.

When that happens, an interparty proceeding within the United States Patent Office is set up to determine who is the first inventor of that invention, that claimed invention. In that connection, the very following section, 11.01(c) points out that the examiner is obliged to be continually on the alert and searching for applications in that technology which may be claiming the same invention and for which an interference should be set up.

Indeed, just prior to signing off on the prosecution or examination of an application, the examiner is charged with conducting a search of applications in classes related to determine whether there are any applications with which an interference should be declared. The record of that interference search typically -- not typically -- is always part of the file history and noted on the file jacket.

Q Professor Kayton, you mentioned that in the particular instance of the original patent 3,859,204, the examiner actually entered an amendment to make a reference to the pending '480 application, is that correct?

A That is correct.

Q I would like to hand you a copy of the complete file wrapper and contents of the '284 patent

application.

Your Honor, for convenience I have bent down a page just about 20 from the end to expedite things.

THE COURT: All right.

BY MR. ANDERSON:

Q I would direct your attention in particular to page 5 of an action of the Patent Office examiner mailed January 12, 1972.

I ask you if that relates to that reference that you mentioned?

A Yes, this is the examiner's amendment.

You will notice that in its first part, it is a form and then spaces are left for the examiner to enter in the changes. In this examiner's amendment, the last page, page 6, is signed by the examiner.

Q The examiner, I think you mentioned before, was Mr. David L. Trafton?

A Yes, David Trafton. That is, David Trafton was the examiner in the '284, the '285 and the two reissues that grew out of the '284 and '285, the patents in suit.

What he did there was typical in one area. There were some claims that had been held allowed, but they were written in dependent form. The inde-

pendent claims had not been allowed, so all he did was rewrite them in dependent form.

Q Is that reflected on the first several pages of the office action of January 12, 1972?

A Yes, up through pages 1 through the top half of page 5, but then what he did relates to what I was discussing earlier when I raised the examiner's amendment.

At the bottom of page 5 he has -- by the way, everything that appears on these pages are directions to clerks in Patent Office to enter these changes. So they are written in a stylized form so that the clerk cannot conceivably make a mistake, although mistakes are made nonetheless.

But it is highly stylized.

Characteristically, if anything has to be inserted, it is separated by double hyphens. If anything is to be eliminated or is referenced for something to be inserted after it, it is placed in quotes.

So down at the bottom of page 5, you have those directions.

Q Is that use of quotation marks and double hyphens illustrated just above the amendment that you just mentioned on page 5?

A Yes, it is the section that is between two horizontal lines about two-thirds of the way down.

Q It shows that quotes are used for deletions and double hyphens for additions?

A Right, or the double hyphen shows the word that goes in and the quote the word that goes out or the number or so on.

Q Then the insert at the bottom of the page is an insert that the examiner is making by this examiner's action?

A That is exactly it. He is directing the clerk in the Patent Office to enter this into the application so that it will appear in the United States patent.

Moreover, on the next page you will note that he has inserted that the current serial number at that time of the application that resulted in the '480 patent be entered in several places in the specification in which the applicant had made reference to that application. So not only did he put that first paragraph up at the top, but he said, "Okay, at page 3 of the specification, number 126,966 has been entered after serial number," and so on.

Now, what had happened there was in the prosecution of that application, the applicant had put the

serial number of the first parent application that ultimately led to the '480. After the continuation application was filed, he eliminated that serial number, knowing that another one for the continuation would have to be inserted but had not been available yet.

The examiner on his own initiative got that new serial number and entered it in this amendment.

Q Mr. Kayton, there are some paperclips at the top of the file wrapper, Plaintiff's 2-A. I think the second one may be the document filed by the applicant.

Is that a paper filed by the applicant, namely, a paper bearing a longhand date 8-10-71 at the top and filed by the applicant in this case?

A I am sure it is because of its form, but I just want to make sure that it is complete and signed.

(There was a brief interruption, after which the following proceedings were had herein:)

BY THE WITNESS:

A Yes, it is. The applicant filed that.

BY MR. ANDERSON:

Q What action was the applicant taking as reflected at the first page of the amendment having the long hand date at the top 8-10-71 in the '284 file wrapper?

A It is the action I just made reference to, deleting the old serial number for the parent application that was

subsequently succeeded by the continuing application which produced the '480 patent.

Q You might turn to the next marked page in that amendment, which I think should be page 24, and describe, if you will, the portion of the applicant's amendment that is included by page 24, and start on page 15.

(There was a brief interruption, after which the following proceedings were had herein:)

MR. ANDERSON: Your Honor, it is normally the Patent Office practice to number every page of a file wrapper from the top all the way through the bottom, and for some reason, in this case, even though these were originally certified copies from the Patent Office, the Patent Office failed to do that and it makes it much more difficult to find a given page.

BY THE WITNESS:

A This is the part of the paper directed to the attorney's remarks, in which he discusses what he has done. It explains what he has done or traverses the examiner's rejections; that is to say, argues why he believes the examiner is wrong or explains amendments of the claims that the applicant's attorney has made.

Do you want me to go on?

BY MR. ANDERSON:

Q There is a reference on page 24?

A Yes, there is. It says, "Applicant has revised the specification to delete references to application 697, 798 and substitutes therefor the reference to the continuation case filed thereon, the serial number of which has not been received to date."

In short, the application was called to the attention of the examiner; that is, the continuing application was called to the attention of the examiner quite promptly.

Q Professor Kayton, at the next page, page 25, at the bottom of the page in the applicant's amendment B, having a longhand date 8-10-71, in '284 file wrapper, there is a paragraph which begins, "After a reading of the specification, including all the various games set forth therein, no one should have any doubt as to the meaning of 'hit' and 'hitting' spots," and it goes on.

Can you state whether that type of dialogue is a part of Patent Office procedure? If so, what part is it? I mean, how does it form a part of Patent Office procedure?

A I don't recall now whether this is in response to an art rejection or not, but I can tell in just a moment.

This was with respect to a discussion of whether there was adequate disclosure, if my understanding

of the preceding paragraph is correct, and this is an action saying to the examiner, "You are simply wrong. This is properly disclosed. It is properly defined. Certainly the law is well clear and establishes that the applicant may be his own lexicographer, and in this particular application the words selected most aptly describe the invention."

That is a typical traversal-type statement.

Q If you can in the file wrapper go forward toward the beginning, about perhaps 20 pages, to the first office action -- it is not even 20. It is only about --

A The office action immediately preceding --

Q Yes, paper number 6, beginning, of course, with a printed form and then having three pages of typed material, followed by another printed form with patent numbers listed.

Perhaps first describe just physically the office action and what makes it up, and then I will ask you about that particular rejection with respect to hit and hitting.

THE COURT: This might be a good point to recess for the day. We will start with this tomorrow morning.

MR. ANDERSON: Thank you, your Honor.

THE COURT: Is this your last witness?

MR. ANDERSON: This is our last witness, your Honor. We will have a few housekeeping matters with respect to some deposition testimony, and I think that will complete our case.

Your Honor, if we could take that file wrapper back, I think we will have them go through with a Bates numbering machine and number

every page so it would be easy to find the respective pages.

Is that acceptable, Mr. Goldenberg?
We will number yours, too, if you would like.

MR. GOLDENBERG: I can't give it to you this evening. At some point when you just have an opportunity to make it conform, I think that would be wise.

THE COURT: Actually, unless you are going to refer to a lot more pages than you have already referred to, you don't have to number it for my benefit. I have been able to follow it all right.

MR. ANDERSON: We could perhaps just tab the specific pages referred to then.

THE COURT: You don't even need to do that. Those clips are all right.

MR. ANDERSON: I think that is all that we will be referring to, are the clipped pages.

THE COURT: I don't think you need to do that, certainly not for my purposes.

MR. ANDERSON: All right, that will be fine.

THE COURT: Mr. Goldenberg, how many witnesses do you have?

MR. GOLDENBERG: I have three, your Honor.

THE COURT: What do you estimate to be the probable length of your case in comparison to the length of the plaintiff's case?

MR. GOLDENBERG: Excuse me while I do the mental arithmetic involved here.

I would like to think, your Honor, that we can complete our case in two days. That would be Tuesday -- well, I don't know how much more Mr. Anderson has for Professor Kayton.

MR. ANDERSON: Not a great deal, your Honor, but I suppose another hour maybe at the very most.

THE COURT: You may finish with Professor Kayton by the end of the morning session tomorrow then?

MR. ANDERSON: I would think before that, especially if we start at the early hour.

MR. GOLDENBERG: Your Honor, we are going to have Wednesday morning, I assume?

THE COURT: Yes, we will have a morning session on Wednesday.

Sounds like we will adhere to our schedule.

MR. GOLDENBERG: It will be touch and go, but I think we can do it, your Honor.

THE COURT: All right, 9:30 -- oh, excuse me.

I have my status calls tomorrow so we won't be able to start until 10:00 o'clock.

10:00 o'clock tomorrow, all right.

(Whereupon the trial of the above-entitled cause was adjourned to Tuesday, January 4, 1977 at 10:00 o'clock a.m.)

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